

SCHOLASTIC

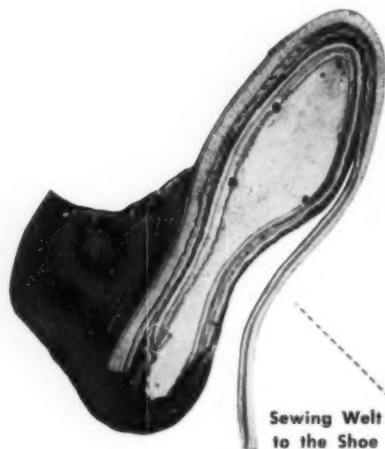
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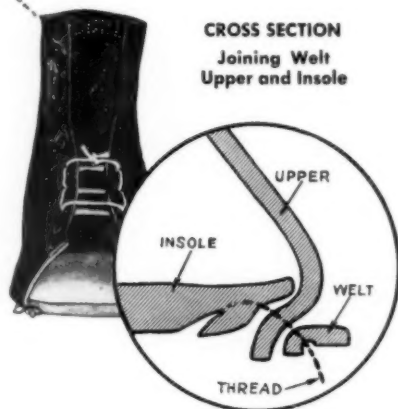
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VOLUME 22 • NUMBER 5 • JANUARY

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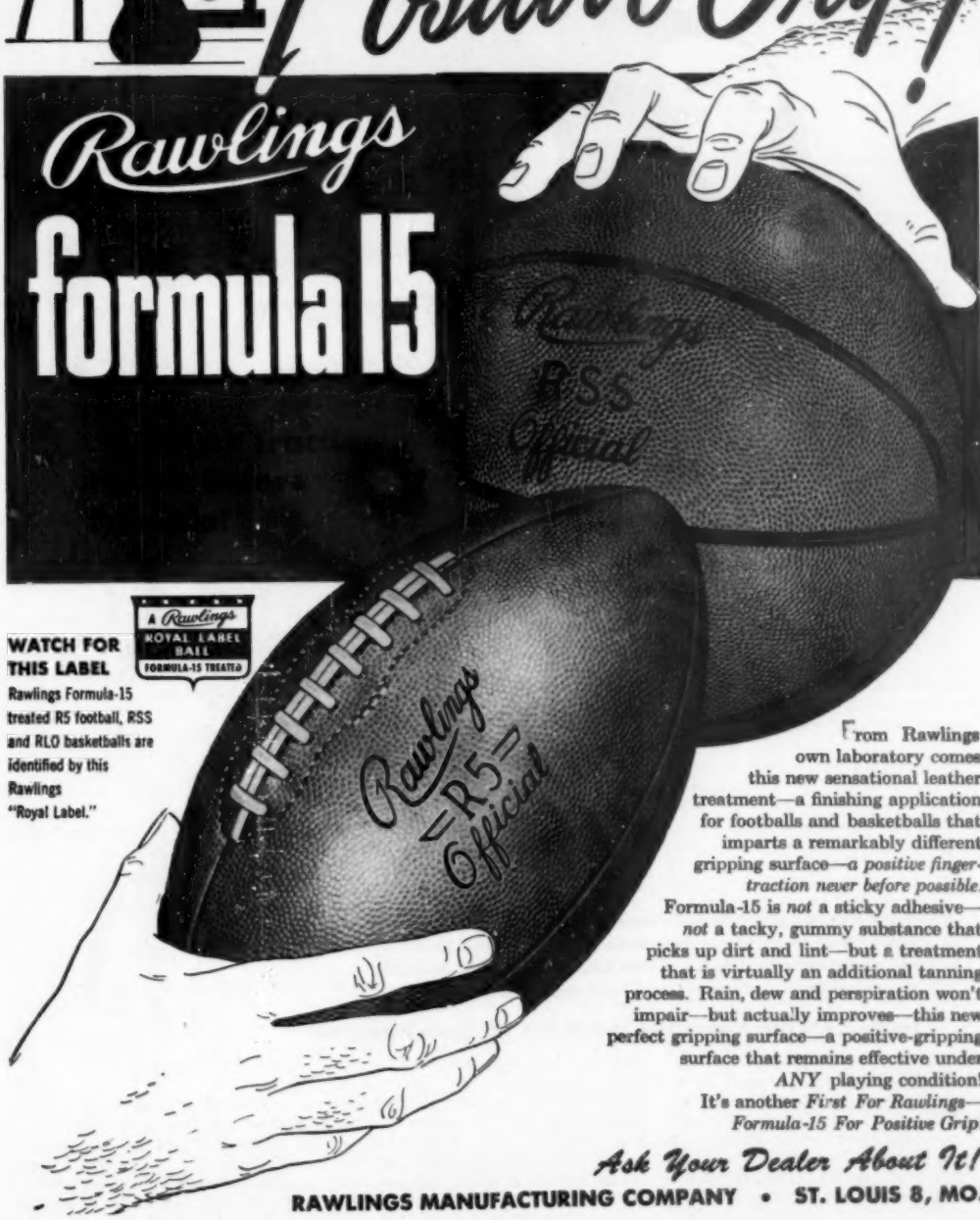
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A record named Tallulah

WHEN Hopewell (Va.) H.S. racked up its 35th straight football victory last October, the local sports editor, George Maranjian, became intoxicated with the smell of history in the making and straight-forth dispatched a communique to us, to wit: Is Hopewell approaching a national record?

This gave us pause. Since nobody keeps track of high school football records, we couldn't merely flip open a record book and find the answer. The usually reliable *New Encyclopedia of Sports* disgorged just one pertinent entry—a notation about a 35-game skein compiled by Ashland (Ky.) H.S. between 1928 and 1932.

Somehow this failed to ring a bell. So, laden with provisions for three days, we plodded into our library and began digging through old newspaper clippings and books.

We unearthed a nugget here, another there, until in all six gleaming winning streaks lay before us. Several of them were unbelievable—so much so as to require documentation. We did this by writing directly to the particular schools.

All this took time, of course, but it was worth it. We can now give you the outstanding high school football winning streaks on record:

89 in a row, Tallulah (La.) H.S., 1931-38.

78 in a row, Bedford County Training School, Shelbyville, Tenn., 1942-50.

57 in a row, Tallassee (Ala.) H.S., 1941-47.

51 in a row, Washington H.S., Massillon, Ohio, 1937-42.

48 in a row, Concord (Mass.) H.S., 1945-50.

46 in a row, Wausau (Wis.) H.S., 1901-1951.

The Tallulah record, incredible as it is, could just as easily have been 100 in a row but for the matter of a first down or two. It seems that in 1930, the year before the streak was begun, Tallulah won 10 in a

row before losing the state final, 0-0, on the basis of first downs.

It was a bizarre season for Tallulah. *Though nobody scored on them all season, they still lost a game!*

The 78-game Bedford County streak (confirmed by Principal S. W. Harris) was an eye-popper on two counts: First, of course, because of its length; and, second, because of its quality.

You won't believe this, but starting in 1942 and continuing through the first nine games of 1946 (practically five full years), Bedford County went through 52 consecutive games without being scored on!

The Concord skein (48) ended with a one-point defeat in a Bowl game in 1950. Except for this post-season mishap, the streak would have reached 59, since Concord won 11 more in a row before bowing the past October.

Six other notable streaks perished in the 1952 fires, namely:

A 36-game streak by Austin (Minn.) H.S.

A 35-game streak by Hopewell (Va.) H.S.

A 31-game streak by Weymouth (Mass.) H.S. and by Memorial H.S., West New York, N. J.

Insofar as we know, here are the greatest winning streaks still going:

47 in a row, Sikeston (Mo.) H.S.

45 in a row, John F. Deering H.S., West Warwick, R.I. (up to its post-season Bowl game against Miami H.S.).

43 in a row, Morenci (Mich.) H.S.

39 in a row, Willow Springs (Mo.) H.S.

The Sikeston mark was confirmed by Principal Metz Cherry. Started in 1948 under Coach Kenny Knox, the streak appeared doomed back in September. With only two first stringers returning, the team did not seem capable of extending the streak through 1952. But spirit and tradition kept the home fires burning, and the job was accomplished.

How important is tradition? The

figures don't lie. Of the 220 boys in school, 96 made the football squad!

Obviously, since all our research was performed on an extremely limited scale, we've probably come nowhere near nailing down every outstanding record.

Here's where all you fellows throughout the country can lend a helping hammer. If you know of any record that can top the ones we've enumerated scribble it on a postcard and send it to us. We'll keep a scoreboard going in "Coaches' Corner."

A BUILD-UP

IF the high school coach's only duty was to coach, he'd probably lead a simpler and fuller life. He'd have a lot more time for himself and might even get to see the wife and kiddies once in a while.

Unfortunately, his job only begins on the court or gridiron. He's also a teacher and a general handy man. Besides purchasing the equipment and helping maintain the athletic plant, he's frequently called upon to assist in the planning of new facilities.

This is specialized work, and few coaches are fully equipped to cope with it. That's why *Scholastic Coach*, ostensibly a coaching magazine, devotes an entire issue every year to the latest ideas in gym planning, track construction, purchase and care of equipment, etc.

That we're filling an essential need is proven by your steady flow of queries on various building and equipment problems. We're always happy to answer your S.O.S.'s and invite everybody with a problem to consult us.

Meanwhile, we take pleasure in presenting our 14th annual Building and Equipment Issue. Loaded with materials on different phases of the high school plant—from planning a track to building a magnetic football board—it should prove a handy reference to everybody in the field.

Only **BAND-AID** Plastic Bandages come in 3 convenient shapes

The image displays three boxes of BAND-AID Plastic Bandages. The top left box is for 'BAND-AID Plastic Patches', showing three patches and text: '100 PATCHES • FLESH COLOR • 1½" x 1½"', 'BAND-AID Plastic Patches', 'Johnson & Johnson', and '100 Plastic Patches 1½" x 1½"'. The top right box is for 'BAND-AID Plastic Spots', showing three spots and text: '100 SPOTS • FLESH COLOR • ½" DIAMETER', 'BAND-AID Plastic Spots', 'Johnson & Johnson', and '100 Plastic Spots ½" Diameter'. The bottom left box is for 'BAND-AID Plastic Strips', showing a strip and text: '100 • ELASTIC • FLESH COLOR • 1" x 3"', 'BAND-AID Plastic Strips', 'Plain Pad', 'Johnson & Johnson', and '100 Plastic Strips ½" x 3" or 1" x 3" (extra wide)'.

They're new... but already they've won widespread professional acceptance. Here's why:

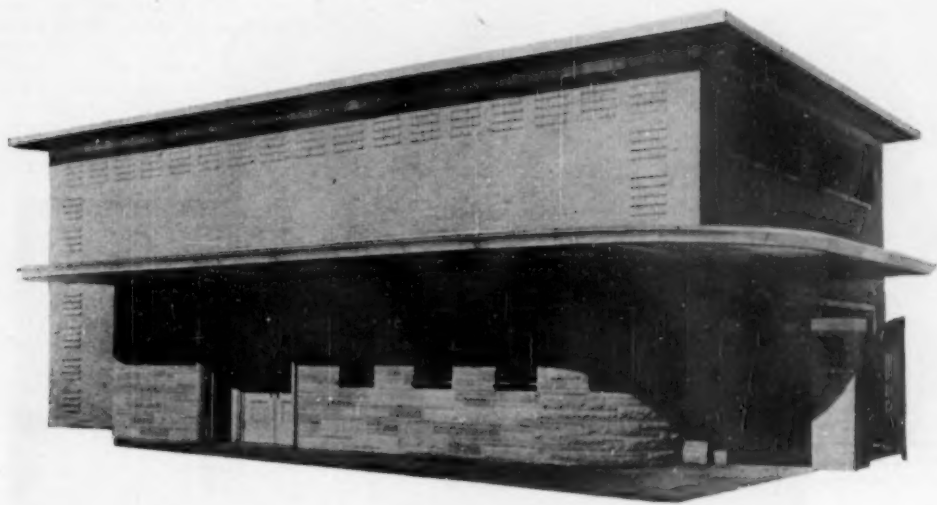
WON'T LOOSEN IN WATER.
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They blend with the skin.

THIN, SMOOTH, ELASTIC.
They conform perfectly... fit, look, and stretch like a second skin.

100% STERILE.

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A High School Fieldhouse

By DALE PATTERSON, Athletic Director, South Haven (Mich.) H.S.

SOUTH Haven boasts one of the nation's best "small school" outdoor athletic plants. It embraces an eight-acre field, a quarter-mile track, a baseball diamond, a softball diamond, a practice area, and three tennis courts. What's more, all—except for the tennis courts—are illuminated for night play by ten 80-foot steel poles carrying 160 1500-watt lamps.

Our real pride and joy, however, is the Richard Dean Arkins Memorial Fieldhouse, completed in the spring of 1951. Offering the most modern of facilities, this building lends tremendous efficiency and dignity to our athletic program.

It also adds an incentive to succeed. The first team to use the facilities dedicated it properly by winning the Big 7 Conference baseball title.

The building nicely combines function and beauty. It's a two-story affair of cinder-block construction, faced with brick and Indiana limestone.

On the first floor are a 13' by 15' first-aid room, a 19' by 13' coaches' room, and a 17' by 49' dressing room that comfortably accommodates more than 40 boys.

The dressing room also contains an area (at one end) for equipment storage and a whirlpool bath. Off this room is an eight-head shower

room with push button showers timed to run one minute. The temperature of the water is pre-determined.

Between the shower and dressing quarters is a towel room, which enables the boys to dry themselves before re-entering the dressing area. Adequate lavatory facilities with two stools, four urinals, and two wash-basins are also provided.

The first floor also houses our main equipment room and laundry. The equipment room is 18' by 12' and contains 32" wide work counters on each side with 10 interchangeable storage bins underneath. On one side above the counter are 52 cubbyholes for helmet storage, towel storage, and other uses.

There's also an equipment window opening into the towel room, through which laundered equipment is issued. This equipment is kept in specially designed bins for easy dispensing.

To the rear of this is the laundry, 10' by 12', containing a wash counter, double rinse tubs, double tub washer, and electric dryer. The dryer is used primarily for finish drying of socks and towels. The regular uniform drying is accomplished on the upstairs racks (to be described later on).

The second floor contains a 29' by 32' reserve squad room, a 13' by

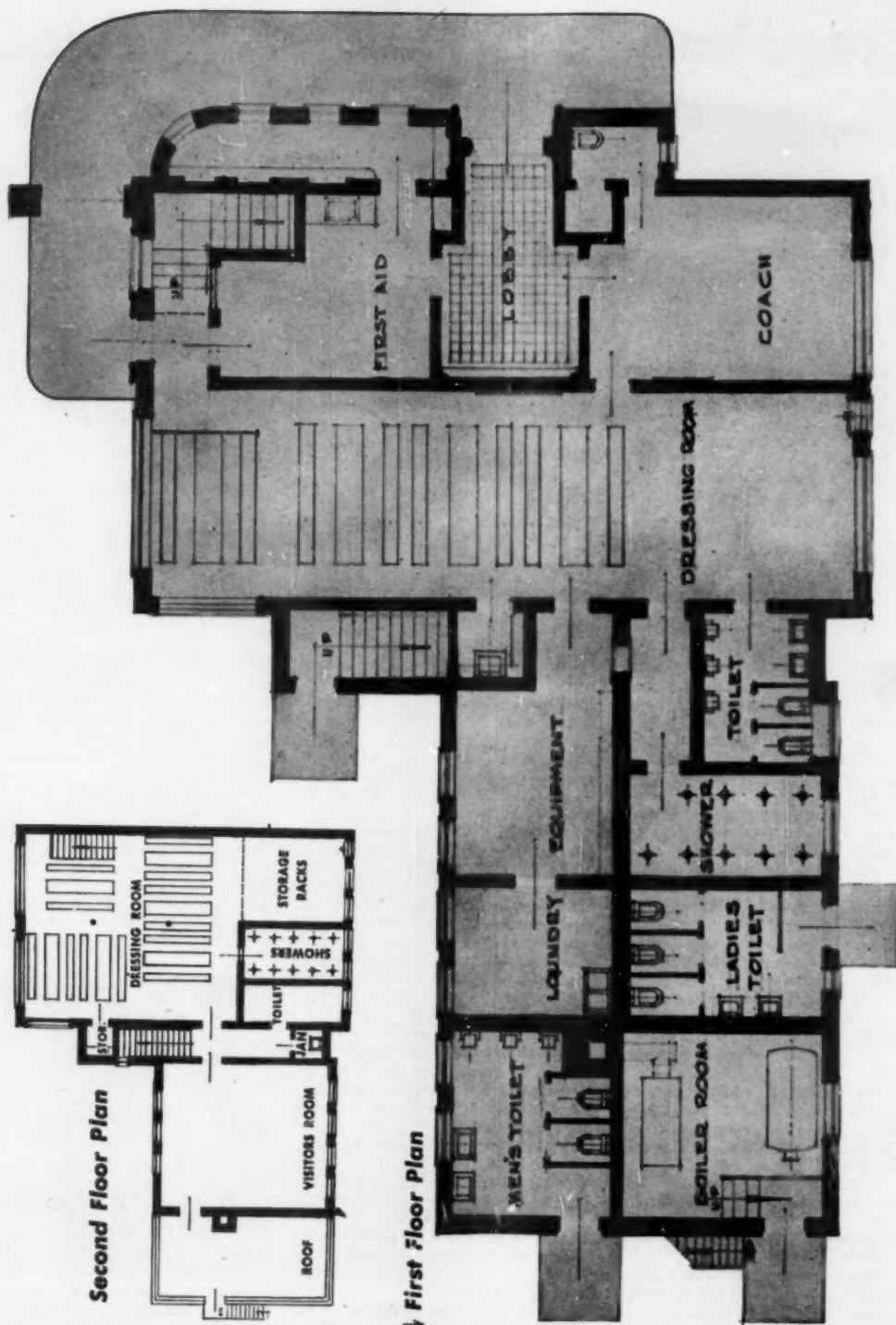
16' rack and equipment storage cage, a 10-head shower room which comfortably accommodates 60 boys, and a 23' by 25' visiting team room which is also used by the recreation department during the summer.

Germicidal lamps are placed throughout these rooms, and the ventilation system changes the air every 30 seconds, completely eliminating locker-room odor. We've also added large steam exhaust fans in the shower room to prohibit moisture from getting at the equipment and causing damage.

One of the most novel features of



Visiting team room (23' by 25') on second floor. The portable clothing and equipment racks along the wall are self-built.



Second Floor Plan

First Floor Plan

the plant is our uniform racks. Designed by the writer and constructed by the Wood Shop Dept., these racks take the place of lockers. There are 14 of these racks, all mounted on four-inch rubber tired roller-bearing casters for easy portability.

Each rack is designed to hold full football equipment for 10 boys—five on a side. It includes a steel support for the helmet, a wooden shoulder for the shoulder pads, and separate hooks and hangers for each uniform item. This means that no two items have to be hung together, thus assuring thorough drying.

The racks are made of 4" by 4" red oak timbers, 10' long. The end uprights are 7' high and 4" by 4" square, while the shoulder pieces are cut from 2" by 8" by 2' red oak.

Four $\frac{3}{4}$ " steel rods run lengthwise of the rack—one through each end of the shoulders, one under the top center piece with hangers on it, and the other lengthwise under the shoe rack. These rods lend support to the rack and also serve as hanging devices for equipment.

The helmet pegs consist of pieces of 1" pipe 8" high with large flat-headed $\frac{3}{8}$ " carriage bolts running down through the pipe and shoulder piece. They are bolted below each shoulder to the center piece.

Each rack is 10' long with the top of the helmet pegs 7' 8" from the floor.

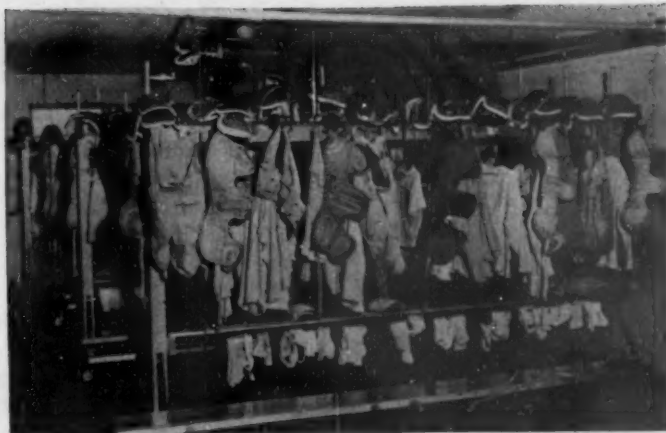
Each rack and each position on the rack are numbered. The boys are then assigned a rack and position number. The benches in front of the racks are permanently anchored six feet apart. This allows plenty of aisle space between the racks.

Our storage bins were also specially designed and made within the school (by the Metal Shop Dept.). They consist of one-inch angle iron framework with the sides and bottom made of heavy gauge wire mesh. This permits complete ventilation and instant identification of the contents.

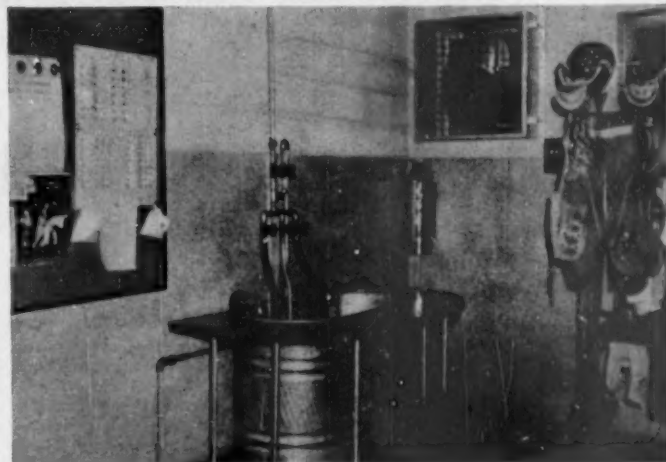
The bins also are interchangeable and mounted on casters to permit easy portability within the building for packing or sorting.

Another innovation is a "coaching bell." This is a large electric bell mounted on the chimney outside. The coach leaves a schedule of his practice with the manager in the equipment room. At the required times, the latter flips a switch—the bell rings and the drills are changed according to schedule.

The interior locker and shower room walls are made of cinder block
(Continued on page 58)



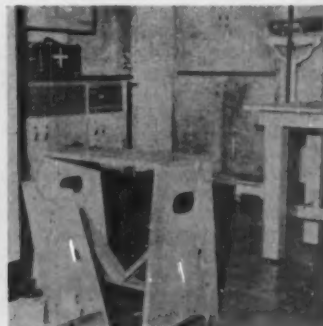
Varsity room showing loaded equipment racks, with each rack holding full practice gear for 10 players. The racks (home-made) are 10 feet long and include steel supports for helmets, wooden shoulders for shoulder pads, and separate hooks and hangers for each equipment item. Note the 24-inch circulating fan centered over the racks.



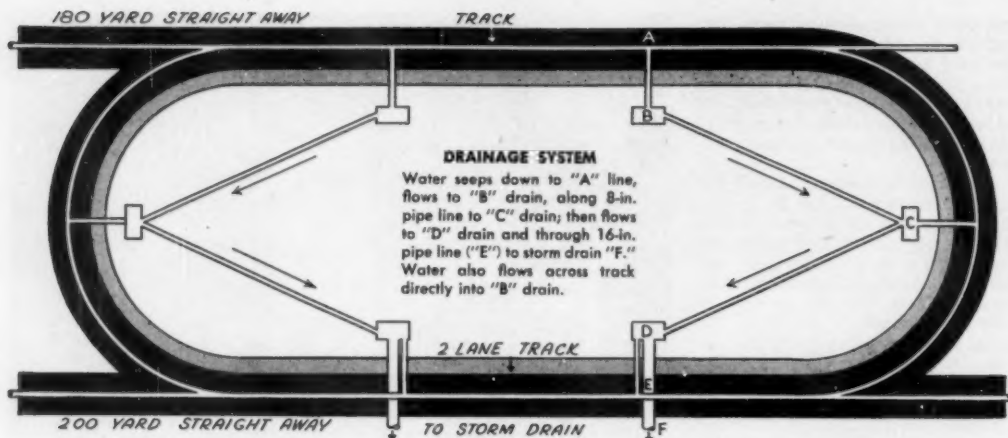
Other end of varsity room showing the type of 24" exhaust fans used for circulation, the full-sized bulletin board, and the self-designed, self-installed whirlpool bath.



Portable storage bins in equipment room, with 32" wide counter immediately above and helmet storage cubbies along wall.



First-aid room, indicating luxurious storage cupboards, work counters, and original, self-constructed taping rack and steel.



U. OF SOUTHERN CALIFORNIA • By NICK APPLE



The Latest in

RAIN and mud no longer interfere with track workouts at the University of Southern California. The NCAA champions now claim the best practice track in the country, an oval which is the product of scientific experimentation.

The track is so well-engineered that the SC trackmen can run on it immediately after the hardest rain-storm. During the titanic downpours last January, which sent streams of water splashing over adjoining curbs and sidewalks, the new \$75,000 track received its first major test.

And it passed with flying colors. Conspicuously absent were the mud puddles that had plagued the Trojans in past seasons. Beneath their feet was a fairly solid track.

Distance runners and sprinters

gave the track its real test. They strided and sprinted without losing traction on what could have been slippery footing.

The next acid test came in March. A Thursday night storm forced the cancellation of several high school and college meets scheduled for Friday and Saturday. But this didn't phase the Trojans. They ran through a light workout in a drizzle Friday afternoon and staged their own intersquad relays Saturday morning.

The secret of the track lies in the composition of the various strata which form it and with two-way drainage. A 1½-inch layer of crushed rock provides the foundation for the track. Immediately above this is a 4-inch stratum of packed Palco wool which gives the track a springy composition. Pea gravel one-inch deep covers the Palco.

Right combinations of the right material are the keywords for the final three two-inch strata. A 50-50% mixture of bituminous coal cinders and clay spreads over the gravel. For the next layer, the percentage of cinders is increased to

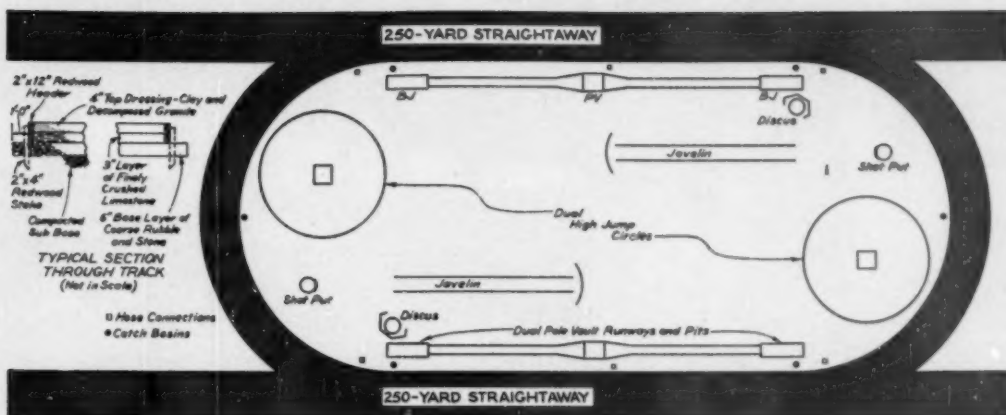
65, the clay lowered to 25, and 10% sandy silt is added.

The surface is a compound of 70% cinders, 12½% clay, 12½% decomposed screened granite, and 5% sandy silt.

Years of experimentation with different combinations of various surface materials have gone into the formula for the top layer. The construction adviser had previously supervised the building of cinder paths at Stanford University, El Camino Junior College, and Long Beach City College. These earlier experiments produced the SC oval which has the desired resiliency, isn't too hard, and yet has adequate stability under wear and tear.

Surprisingly fast drainage keeps the track ready for all-year service. Water drains both downwards and in toward the curb. The water that seeps through the track's six strata eventually collects in an eight-inch pipeline running through a rock-lined trough beneath and in the center of the crushed-rock foundation.

One foot wide and deep, the
(Continued on page 60)



SAN DIEGO STATE • By J. THOMAS STURAK

Weatherproof Tracks

CONTAINING many outstanding and unique structural features, San Diego State College's newly completed \$112,000 track and field represents the fruition of 25 years of coaching experience and six years of practical dreaming by Charles "Choc" Sportsman.

Dramatically tried and proven, the new track earned its tag of "weather-proof" beyond the wildest expectations. Christened with the heaviest January rains in 67 years, its decomposed granite surface absorbed as much as two inches of rain in one 24-hour period.

Yet not a single day's workout was lost! Runners set their spikes into its puddle-free surface as soon as the rains stopped. Though over 15 inches of rain fell during the first three months of the year, San Diego trackmen enjoyed uninterrupted training schedules.

Sportsman first hit upon the idea of an inexpensive, rain-resistant track dressing out of necessity. Ever since his arrival at San Diego State in 1946, he had been plagued by early season rains. These spring showers would turn S. D.'s fine natural

adobe-clay track into a useless quagmire for days on end.

The final blow fell in 1949 when Sportsman was rained out of a meet for the first time in 22 years of coaching. At the time the "new track" was still a distant dream, but "Choc" vowed then and there that it would be a weather-proof track if nothing else.

Seeking a temporary solution, Sportsman remembered some curious walkways that had recently been put on the grounds of a grammar school near his home. These walks remained firm during wet weather and dried within hours.

Investigation revealed that these pathways were strips of rolled decomposed granite. Sportsman suggested to the college's maintenance manager that such a layer be spread on the track's one 220-yard straightaway. Approximately 500 yards of the crushed rock were needed for the job.

The fruits of this resourcefulness are easily seen in the records posted by San Diego teams in early season meets. In both 1949 and 1950, the Aztecs won the college division

championship of the AAU-sponsored Long Beach Relays, held annually the second week of competition.

These successes stemmed from the simple fact that Sportsman's teams were usually in better early-season shape than their local opponents. While other teams were sitting out workouts or exercising in gymnasiums during rainy weather, "Choc's" boys were sprinting or pacing down their "rain-proof" furlong.

The decomposed granite stretch provided fine footing in all weather, and many excellent sprint times were turned in on its surface, including a 9.5 hundred, the fastest official clocking in the world during 1951.

When actual construction on the present track began in the fall of 1951, Sportsman was quick to see the advantages of an entire track surfaced with decomposed rock.

Besides its resistance to adverse weather, decomposed rock offers many other advantages to the prospective track builder. In parts of the country removed from the heavy coal-consuming industries, the rock

(Continued on page 56)



Overall view of the large, modern, completely equipped Wellsville (N.Y.) gym.

A Gym Dandy!

THOUGH the new Wellsville (N.Y.) Central H.S. gym isn't the most grandiose arena in America, it does happen to be the newest and largest gym in Western New York. Completely equipped with modern facilities, it serves both the physical ed and athletic departments and everybody is exceedingly happy with it.

The gym came as part of an extensive \$725,000 school remodeling project which saw the original U shape of the building converted into a hollow square. Because of site limitations and occasional flood conditions, the gym was placed on the second floor. It is reached by a large staircase from a public entrance on the first floor.

Situated in this foyer area, which is individually ventilated for smoking, are public toilets, a concession booth, ticket office, checking room, and public telephone booth. By the use of gates, the entire area—both entrance and gym—can be closed off from the rest of the school building.

The over-all dimensions of the gym are 102' x 98', with the main court measuring 84 x 50 plus substantial end zones of 10' and 8'. Two cross-courts provide excellent 70 x 40 basketball areas, which come in

very handy for gym class and intramural competition. Foldaway backstops are utilized in all six positions.

Regular seating capacity is 1,500, furnished by folding bleachers on both sides of the gym. Steel beam construction in the roof provides unobstructed vision from every part of the gym.

Two volleyball courts are imposed on the cross-court areas, and the gym has been laid out so that the folding bleachers on one side can be utilized for spectators during intramural play on the cross-courts.

The gym is heated and ventilated by one large factory-assembled cabinet type of heating and ventilating unit designed to operate on low pressure steam. This draws fresh air from the outside. It heats the air and then blows it through three ventilating ducts entering the room through nine outlets in the ceiling construction.

Besides this main unit, there are four large ventilating units located in the middle of the four walls which blow heated air downward, and four ventilating units located approximately four feet off the floor in each corner of the gym.

The entire area is illuminated by windows on two sides and 35 heavy duty 750-watt incandescent reflect-

ing fixtures located in the ceiling.

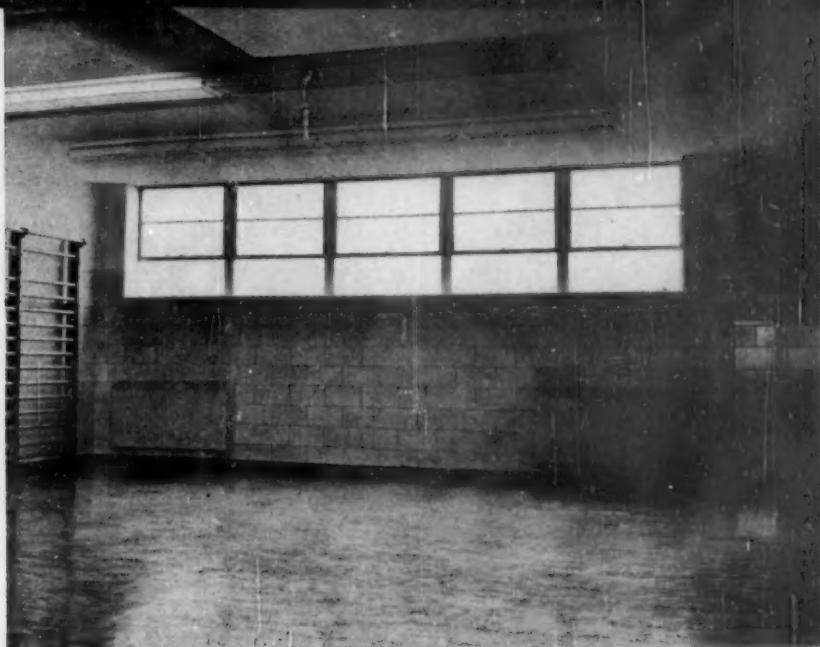
Announcements are made over four public address speakers situated in the center of the ceiling and pointing toward the four corners. (See above photo.) A junction box in the floor furnishes connections for the p. a. system and scoreboard, as well as a telephone connection for broadcasting.

The gymnasium equipment includes climbing ropes, buck, horse, parallel bars, chinning bar, folding horizontal bar, standards for volleyball and badminton, and special equipment such as bell bars and all small game items.

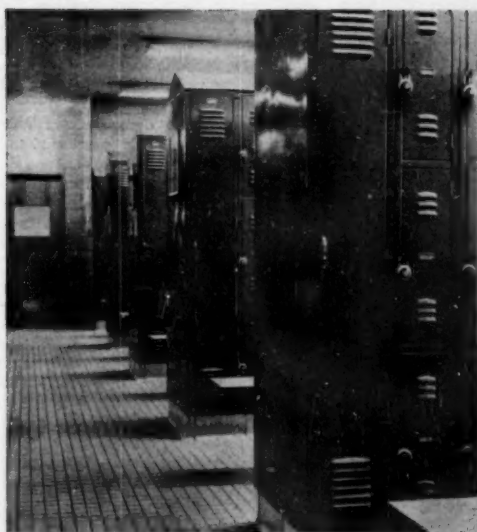
Connected to two corners of the gym are 13' x 15' storage rooms, one of which is furnished with bins and cupboard space for balls and other small equipment.

Directly adjacent to the gym are the other main units—a corrective exercise room, shower and locker rooms, and a physical education instructor's office with adjoining shower and toilet facilities.

The locker room is 34' x 24' and is lighted by windows along one side and fluorescent fixtures throughout the room. It contains 60 lockers 12" x 12" x 72" in size, each with nine adjoining lockers 9" x 12" x 72" in size. (Concluded on page 59)



Corrective room possesses stallbars, pulleys, and other gym equipment.



Locker room contains 60 large and 540 small units.

Shower room features eight shower heads.



By SYDNEY MILES, Wellsville (N.Y.) Central H. S.

JANUARY, 1953

By **NORMAN R. MILLER**

Vice Pres., American Playground Device Co.



Modern playground merry-go-round with enclosed safety platform.

Safe Playground Facilities

WHENEVER a child meets sudden death under a speeding automobile, the community immediately raises a clamor. Citizens then talk safety, think safety. It's likely to be the main topic of discussion at the next meeting of the Lions, Kiwanis, or Rotary Club.

The consensus: "This town needs more neighborhood play areas and more swings, slides, and see-saws to keep the kids off the street."

But this isn't enough. These playgrounds must also be well-supervised, properly located, and equipped with ruggedly built, safe apparatus. For, just as accidents on streets, railroad tracks, and other dangerous areas will produce a public clamor for more recreational facilities, so will a playground accident incite a storm of criticism.

Not long ago, for example, hard bituminous surfacing was given a black eye by several magazine articles dealing with a series of playground accidents in Los Angeles. The unfavorable publicity caused school and recreation men to re-appraise this particular problem, and we're now hearing about successful experiments with rubberized asphalt surfacing in Akron, Ohio.

Most playground accidents stem from either poor supervision or no supervision at all. In properly supervised recreation programs, the children are apprized of the need for good conduct, carefulness, and fair play. Older boys and girls are utilized as volunteer safety leaders,

to continually warn the younger children of dangerous practices.

The location of the playground is a vital consideration. Children shouldn't be required to cross heavy traffic, railroad tracks, and other hazards in order to reach the playground.

On the playground itself, the dangerous aspects of multi-use must always be kept in mind. For instance, the baseball area should be adequately sized and properly situated so that children playing other games won't be endangered by batted balls.

The apparatus should be set up in well-defined, protected locations, with the areas used by small children being enclosed. The riding of bicycles on playgrounds is dangerous and should be discouraged. The installment of steel racks will assure safe, neat, efficient parking.

The proper construction, installation, and maintenance of the equipment are prime requisites for promoting safety. First of all, the apparatus must be well-designed and ruggedly built to assure many years of perfect, repair-free service before maintenance becomes much of a problem.

When purchasing equipment, specify certified Grade-A malleable frame fittings of the clamp type, tested to 50,000 pounds tensile strength, fully guaranteed against breakage.

Avoid threaded fittings, grey iron fittings, or fittings which necessitate drilling the top beams of swing or

combination unit frames. All such fittings reduce the strength of the equipment, multiply maintenance and repair costs, and reduce the safety factors so essential in such apparatus. Also avoid makeshift, unsightly welded joints or fittings. Welding complicates the work of installation, makes repair or replacement doubly difficult, increases the freight rate, and destroys the protective zinc coating of the galvanized finish. Where malleable fittings of the clamp-type are employed, pipe members normally take the lower "pipe" rate rather than the higher "apparatus" rate.

The equipment must be correctly installed, with adequate concrete footings and perfect alignment of all frame members to assure maximum structural strength and rigidity. Properly installed, the equipment is ready and able to withstand years of severe use and abuse. Detailed but easy-to-read blueprints, which show the ground plans and outline the recommended procedures for installing each unit, are usually furnished by the manufacturer.

It's also essential to install the apparatus at the proper heights for the various age groups.

After the equipment is correctly installed, a careful maintenance program is essential. Timely repainting and repainting of equipment will make it last longer and provide a greater measure of safety for the children.

Inspect the equipment regularly.

Over 100
Colleges
are now using
BATRITE
Pro Treated
Baseball Bats

This season over 100 leading colleges used and preferred Batrite Pro Treated bats . . . and the list is growing every year.

Hanna's exclusive and revolutionary treatment—tightly binding together the layers of wood on the hitting surface—protects the barrel for life against excessive chipping, splintering and denting.

Coaches everywhere are swinging to Batrites because they are tougher, last longer and make budgets go further.

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COMPANY**

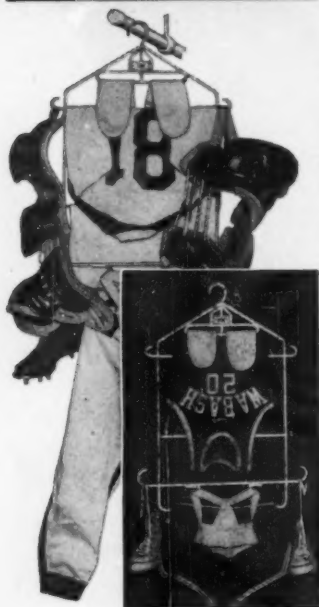
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ALL-AMERICAN HEAVY-DUTY UNIFORM HANGER



Faster, More Thorough Drying . . . Much More Hygienic and Efficient Handling For All Athletic Gear

Accommodates all of a player's football, basketball or baseball gear, solves the old problem of drying and storing sweat-soaked equipment. Ruggedly made—extra heavy steel rod, electrically welded into a strong, one-piece unit. Molten tinned finish protects permanently against rust and the corrosive action of perspiration.

Each, complete with
Number Plate, f.o.b.
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\$160

★ Write for literature on American Approved
Gymnasium Baskets, All Steel Basket Racks,
Foot Baths and Dressing Room Equipment.

AMERICAN PLAYGROUND DEVICE CO. ANDERSON, INDIANA

WORLD'S LARGEST MANUFACTURERS OF FINE
PARK PICNIC, PLAYGROUND SWIMMING POOL
AND DRESSING ROOM EQUIPMENT

Defective equipment should be promptly taken out of use and repaired. Hazards under apparatus, such as exposed pipes and unsafe surfacing, should be removed and pits of tanbark, sawdust or shavings should be installed to cushion possible falls.

Makeshift repairs or temporary patching of badly worn or shoddy equipment is false economy and actually develops additional hazards for the youngsters. Repairs should be made thoroughly and in a workmanlike manner.

Each piece of equipment presents its own peculiar safety aspects with regard to construction, installation, maintenance, and use.

SET SWING IN CONCRETE

Let's consider the swing, one of the most popular and oldest types of recreational equipment. Since a swing is subjected to much stress, it should be set in concrete and tested for absolute verticality. Swing hangers deteriorate from neglect, but not when made of certified malleable iron with oil-impregnated bronze bearings.

Hundreds of park, school, and municipal playgrounds are replacing their worn, outmoded swing seats with rubber swing seats. There are no sharp corners, rough edges or massive end castings to cause injury to the child. A strong hardwood core, with all edges smoothly rounded, is encased in a heavy covering of live, shock-absorbing top quality rubber, comfortably ribbed to prevent slipping.

Here are some safety tips for children using swings: Don't stand or kneel on swings. Don't climb on frames. Don't jump off the swing when it's still in motion. Don't stand near swings in motion. Don't swing crookedly. Don't hold a smaller child on your lap while swinging.

While the slide is always a thriller for the youngster, this equipment need present no serious dangers. Steps and braces should be firm and free from slivers, screws, and nails. All-steel slides eliminate any possibility of injuries from the slivers so often present in poorly maintained wooden chute siderails.

Maximum safety is assured by a large, roomy platform and heavily ribbed stair treads and improved handrails made of tested steel pipe.

Worn slide chutes present a special problem. Few departments have the necessary tools and equipment to do a thorough job of repairing or rebuilding. It's usually advisable to ship the worn chutes to the factory for a factory-rebuilding job.

Where the chutes have been in service for 10 years or longer, it's also good economy to replace them with the new all-steel affairs. It's a good idea to send the chute fittings along with the chutes, so that the factory can properly locate them on the new chutes and thus greatly simplify the installation job.

Soft, clean sand should be placed at the bottom of the slide to cushion the landing. Dangerous practices to avoid include horseplay, overcrowding on the platform, more than one youngster sliding at one time, sliding backwards, and crawling or running up the slide.

One of the finest pieces of apparatus is the castle tower which, when properly installed, maintained, and supervised, assures safety while children satisfy that urge to climb. It keeps them off trees, fences, housetops, and other hazardous perches.

A companion climbing structure is the castle walk, which will accommodate as many as 60 youngsters at one time as they explore their way to sounder health, conjuring visions of ancient castles, moats and battlements, arching bridges, and mysterious caverns.

Since extreme carelessness sometimes will cause accidents on climbing structures, here are some safety suggestions for the youngsters: Don't play tricks on them. Don't step on the hands and feet of other children. Hold on carefully. Don't play tag, jump up and down, or show off; these antics may cause bad falls.

SEE-SAW BOARD

The see-saw board is a "must" on every playground. Since the device is made of wood, it should be inspected regularly for badly worn, splintery, or cracked boards, which are definitely dangerous. Defective boards should be either repaired or replaced promptly.

See-saw board fulcrums, which compensate for the varying weights of children, should be protected to prevent the children from catching their fingers near the center of the board.

Children should be advised as follows on the safe use of see-saws: Warn person on other end before getting off. Hold board tightly when getting off and let it rise gradually so child on the other end may get off safely. Keep a firm hold, sit facing each other, and don't bump end of board on the ground. Sit only, don't stand on board. Only two should sit on board at one time.

(Concluded on page 49)

MacGregor

introduces
"CUSTOM-BUILT"
the glove of tomorrow

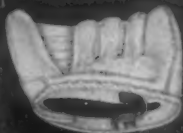


No. GCB

■ MacGregor is proud to introduce the "Custom-Built" model—the finest glove ever made. When you see this great new glove, you'll agree that it's the glove for top service and performance.

MacGregor Sports Equipment

CINCINNATI 32, OHIO



Locker Room Short Cuts

By SAMUEL DUBOW

Athletic Director, Hillside (N.J.) H.S.

DURING the past decade, the Hillside public schools have developed a number of helpful practices in their physical education and athletic programs, which other schools might adopt with profit.

SOAP FOR EVERY SHOWER

FOR every shower, there must be soap—in some form or other. We've worked out a very simple, practical plan to take care of this service. Each student pays ten cents per month, which entitles him to a ½ oz. cake of soap for every required shower.

We buy the soap from a wholesaler at approximately \$9.50 per thousand. Though it takes 25,000 cakes to meet the yearly needs of our 350 boys, and though we supply our athletic teams without charge, the income more than pays the freight. The surplus is added to the students activities fund, to be used for other worthwhile projects in the school program.

The students are happy to find little cakes of soap available at all times, and are more than willing to pay the monthly fee of one dime.

The Board of Education recently indicated its approval of our plan by voting to defray the expense of the soap. We're now free to divert the soap money toward the financing of our athletic program.

PERIODIC INSPECTION

EXPERIENCE has taught us that high school students are apt to be very lax in the care of gym uniforms. At Hillside, we require every youngster to wear clean shorts, T shirt, socks, supporter, and—most important of all—the proper footwear.

Under no circumstances may a student borrow somebody's else's equipment. Plenty of roomy lockers are available for dressing purposes, but we don't want the students to store clothing in them. We continually encourage them to take their things home for regular laundering.

The first step in our clean-equipment program is an appeal to the mothers at the regularly scheduled meetings of the Parent-Teacher Association. Though we can't count on 100% cooperation, we've found that the mothers will help more than anyone in the problem of keeping gym clothes clean and wearable.

The next step is to inform the students of our intention to hold periodic inspections. However, no hint is given

as to the time of the check-up. A class is thus subject to a complete inspection at any time; and if a youngster wishes to avoid embarrassment before his fellow students he must always be on guard.

Moreover, anyone appearing in soiled gym clothes is obliged to do extra work after school hours. If the offense is repeated and negligence becomes a habit, we feel obligated to withhold credit in physical education.

Since full credit in physical education is an absolute requirement for graduation in our state, we find that our plan is simple to operate and exceedingly effective in result.

ATHLETE'S FOOT

AT some time or other in our teaching career, all of us have had trouble combatting so-called "athlete's foot." Regardless of the proficiency of our preventive measures, you'll always find a few youngsters reluctant about using them. Moreover, in the event of foot infection, these students will be loath to report the condition or do anything to remedy it.

It's been our experience that a foot inspection under the supervision of the school nurse very early in the fall term works wonders for our boys and girls. This, followed by special care for those who need it, gets us off to a good start for the year.

An important part of our job is a lengthy discussion on proper foot hygiene and the necessity of reporting immediately anything even slightly resembling an infection.

If a careful diagnosis reveals athlete's foot, we provide the necessary medication and make sure that the student is kept off the gym floor until medical authority deems it safe for the student to resume daily activity.

Foot inspections, held periodically—at frequent intervals, at first—prove a great help. In time, the boys learn to cooperate on their own account, and the check-ups become less frequent. However, we never completely eliminate them.

"HAIR" CONDITIONING

CARRYING out the inspection idea, we stress the fact that a boy's hair needs a weekly wash with a suitable shampoo. Here, too, our plan calls for a periodic check-up at frequent inter-

vals. We find that the students soon grasp the idea and begin keeping their hair well-groomed of their own accord.

To make certain that every youngster has equal opportunity to be well-groomed, we even furnish a shampoo for those who need it. Our classroom teachers are grateful to us for this, because in a roomful of youngsters, the odor from neglected hair can cause as much offense as that from unwashed bodies.

TOWEL SYSTEM

AT Hillside, a shower is required after all physical education and athletic activity periods. What's more, the student is expected to dry himself with a clean towel. How is this lofty objective attained? Through a simple but effective towel dispensing system.

The students in our regular gym classes may purchase a towel for five cents. An attendant, assigned by the instructor, takes the money and has the student write his name on a sheet of paper placed on a table for this purpose.

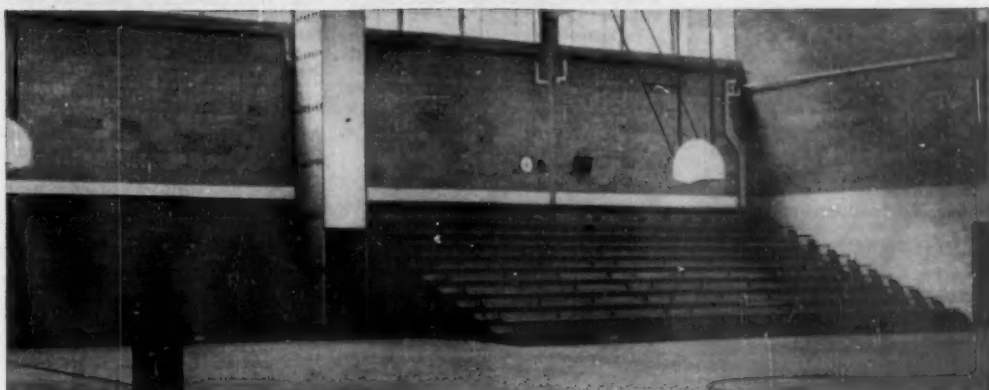
After the towel has been used, it's put into a hamper at the end of the locker room and the user's name is scratched from the list. Failure to comply with this regulation makes the person responsible for the cost of the towel. Very few towels hence go astray.

The towels are picked up and delivered twice a week, being laundered by a local firm at the rate of eight cents a pound. To insure the successful functioning of this system, we provide as many towels as there are students.

The service is used to so great an extent that the money paid for rentals not only defrays the entire laundry bill, but helps pay for the replacement of towels. The system actually saves us over \$300 per year in laundry costs for our athletic teams. (All squad members are furnished towels free of charge.)

The Board of Education was so pleased with our account of this service that it's now buying the towels for us—and the profits are being channeled to the students activities fund.

More important than anything else, however, is the cleanliness promoted by the system. No student can be excused from showering for lack of a towel—because a towel is always available. We don't allow boys to share a towel or used soiled towels



1 plus 2 makes



3 gyms in one!

■ HORN folding gymseats and partitions can easily triple your gym facilities! When the partitions are folded and the seats extended you have an exhibition gym that pays its own way. With the gymseats folded and the partition extended your gym becomes two separate units.

For planning that gives you three gyms in one, plan with Horn. Horn equipment gives you the design you need for efficient use of space, and the quality of construction you need for long years of trouble-free service. Horn representatives in your area will help you plan your three gyms in one... Horn factory crews will supervise your installation.

Write today for details on Horn folding gymseats and folding partitions... and the new Horn wardrobes and folding stages!

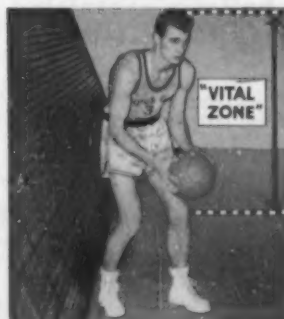
HORN BROTHERS

SCHOOL EQUIPMENT

DIVISION OF

THE BRUNSWICK-BALKE-COLLENDER COMPANY

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FOR SAFETY, plan with HORN! Horn folding gymseats provide a smooth, sloping surface when folded... real protection for the vital zone!

Install Nurre all plate glass Banks

- For greater strength
- For greater accuracy
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A Fabricated from heat-strengthened polished plate glass—3 to 5 times as strong as ordinary plate.

B Glass gripped firmly on all sides by wide, rigid angle iron frame. No beveling—glass has square edges to prevent breakage.

C Extra-large steel face plate, 10" x 9 1/2" x 1/4" thick, attached to back by three widely spaced bolts to provide maximum strength. Only three holes through the glass. Basket mounts securely on four lugs which are correctly spaced to accommodate official basket (No. 960) manufactured by Shutt Mfg. Co., Litchfield, Ill.

D Two steel mounting flanges on each side. Bank is designed for any type of suspension. Also available with flanges and loop for post-type installation.

**Send for free
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Wherever Nurre All Plate Glass Banks are used, they win the praise of players, coaches—yes, and spectators, too! Because built into every Nurre Bank is extra strength and permanence... ever lively and accurate performance... plus unobstructed visibility for the fans in the end-court seats.

Nurre All Plate Glass Banks are guaranteed against breakage incident to ordinary use in play. There has never been a Nurre Glass Bank broken in play—in 30 years.

Specify Nurre—always. Send for free detailed bulletin—today.

THE NURRE COMPANIES, INC.
Bloomington, Indiana

which they might find hanging in lockers.

To schools which face the shower problem and all that it entails, we strongly recommend our towel dispensing system. It's inexpensive and does a great job of handling a tough situation.

THAT B.O. PROBLEM

WE'VE learned that a jar of dependable deodorant, placed on our "service table" in the locker room together with a placard which reads "Help Yourself," just about takes care of our "B.O." problem.

In other words, for the tiny sum of \$25 per year, we're able to handle an extremely delicate situation in a wonderfully practical way! If a youngster cares to help pay for this unusual service, he may do so by dropping small coins into a receptacle placed on the table. (An empty adhesive tape can serve the purpose quite adequately.)

This practical method enables us to treat all students alike. No one is singled out or embarrassed, and the instructor has the satisfaction of having done something really worthwhile about the problem.

MINOR INJURIES

WE stress the rule that all injuries must be reported. Where serious injuries are concerned, there's no problem, since they necessitate immediate attention and someone is always on hand to see that the proper medical aid is administered. In the event of small cuts, scratches, blisters, and numerous other minor injuries, boys are apt to be negligent—and this negligence may result in serious infection.

We've reduced the problem to a minimum by placing posters in conspicuous parts of the locker room, which read—REPORT ALL MINOR INJURIES. A dab of merthiolate may save a boy from serious infection. It also teaches him a valuable lesson—to do the right thing at the right time.

CHECKING VALUABLES

THE elimination of petty thievery in locker rooms is always a big job. Our plan is to provide every boy with a heavy manila envelope (5 x 7) at the beginning of each semester. The student prints his name on the envelope, and at the beginning of each gym or practice period he puts all his personal valuables in the envelope and places it in care of a reliable person assigned to that job in the instructor's office.

At the close of activity, the youngster calls at the office door and is handed his belongings—all safe and sound.

Whenever a boy loses his envelope, he may replace it by paying five cents for a new one. The nickels accumulated during the course of the year just about pay for the complete service.

It should be added that students

who fail to check their valuables must assume full responsibility for losses. The envelope system has just about solved our petty thievery problem in the locker rooms.

INVENTORY SYSTEM

AN inventory system of some kind is an absolute must for every physical education department. An accurate record of supplies and equipment helps eliminate waste, aids in planning for future needs, and goes a long way toward justifying further expenditures.

One of the basic requisites of such a system is simplicity. You don't want a system that requires a lot of intensive deskwork. Your instructors have too many other duties to be saddled with such a back-breaker.

At Hillside, the director of physical education also administers the athletic program. He's held responsible for the purchase of all supplies and equipment, and must supervise their use and care. Accurate lists indicating material on hand and material needed, are the only means of determining just what purchases have to be made in order to effectuate the program.

To obtain this information, we've devised inventory sheets upon which the various instructors and coaches may state, in actual figures, just what supplies they have and what they will need. Experience has taught us that to start the year right we must have all the equipment ready for distribution at the very beginning of the fall term.

Our mimeographed forms list every item of equipment. There's a sheet for each activity (physical education, football, track, basketball, etc.). The instructor or coach is asked to indicate what supplies are available and what he'll need for the following year. Copies of the inventory sheets are then submitted to the principal of each school, as well as to the director of physical education.

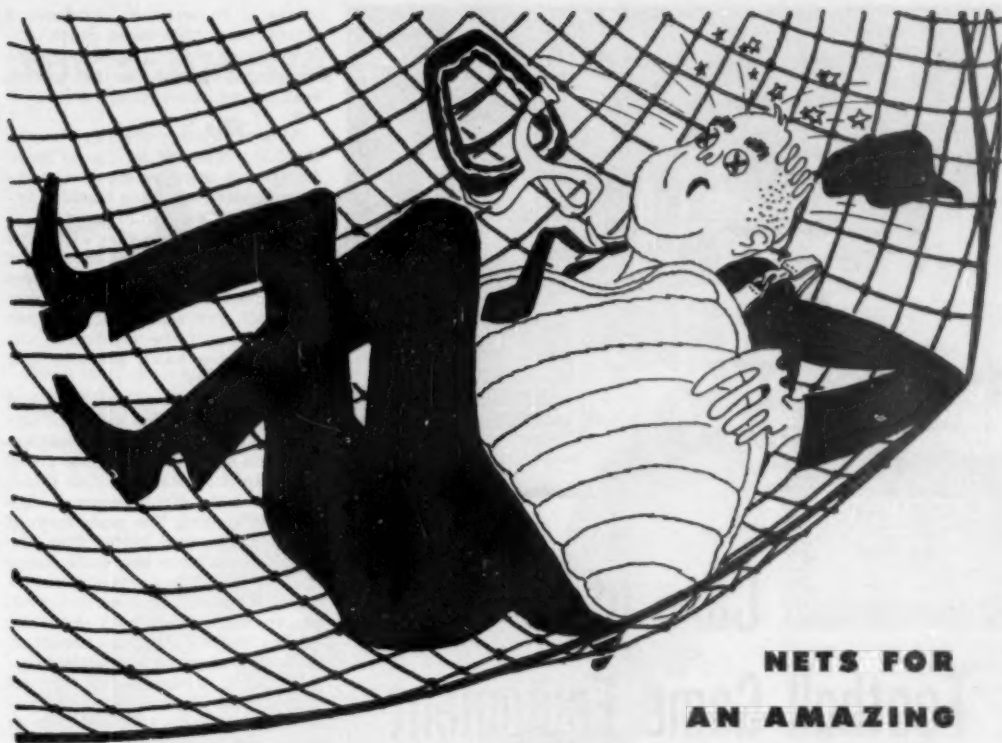
The form enables us to keep tabs on each item for a period of six years. This isn't as difficult as it sounds. All the equipment (for the particular activity) is carefully itemized on the left hand side of the sheet. The rest of the sheet is broken up into six columns, one for each year. The instructor makes his notations in the blank spaces under the current year.

To get an over-all picture of the equipment situation, we've also devised a composite inventory form, comprising the lists from all the schools. This form is exactly like the individual inventory sheet except that the names of the schools rather than the years comprise the column headings.

This composite form is presented to the superintendent and the director of physical education. The procedure of checking up all along the line greatly helps simplify matters.

The inventory for the various sports is handled a bit differently than that

(Concluded on page 63)



**NETS FOR
AN AMAZING
NUMBER OF PURPOSES**

If the sport requires a net—you can be certain there's a Gold Medal net to meet its official or special requirements. You'll find the Gold Medal label on the finest tennis nets you can shake a racquet at. That goes for badminton, too.

Then there are goal nets for basketball, hockey, lacrosse and soccer—as well as cage nets for golf and baseball.

Yes, the Gold Medal list is long and complete—

protective nets, dividing nets, skeet nets—in fact, *a net for every purpose and a purpose for every net.*

Bring us your special netting problems. Large or small, you'll get the same service and quality that have made Gold Medal nets favorites with coaches, pros and club managers everywhere.

*Makers of fine nettings
for 111 years*

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Care of Football Game Equipment

By JAMES V. SULLIVAN, Equipment Supervisor, U. of Delaware

WITH prices at peak levels, the athletic director and coach must think in terms of careful planning and saving in order to keep the budget on an even keel.

One of the best ways of saving money is by buying quality equipment and then carefully maintaining it to assure maximum longevity. It's a well-known fact that clean, well-kept equipment not only lasts longer but has an excellent psychological effect on the players.

Schoolmen charged with the care of football game equipment may glean an idea or two from the methods employed at the University of Delaware.

After every game, all the used equipment is spread on tables and allowed to dry for 24 hours. The temperature of the room is set at approximately 70°. After this drying period, the jerseys are shaken and brushed and then sent to the dry cleaners. This is necessary because they're not washable.

The pants, however, are washable and can thus be cleaned by the school. First, the knee and thigh pads and belts are removed, and the pants brushed and shaken. Then they're washed in the school laundry.

The pants are soaked in lukewarm water for about 15 minutes. Then the dirty water is let out and clean water is put into the washing machine. The pants are washed for 15 minutes, then rinsed for 10 minutes.

A standard laundry soap is employed, with extreme care being exercised not to use an excessive amount. Too much soap necessitates a long rinsing period, which isn't advisable.

Moreover, if all the soap isn't removed in the rinsing process, the unremoved soap will stiffen the material. By limiting the washing and rinsing time, the pants are safeguarded against harsh treatment in the washer.

After the rinsing, the pants are

placed in an extractor to remove a greater part of the water. Since artificial drying tends to cause excessive shrinkage because of the intense heat, the pants are hung outdoors to dry.

After the pants are dry, they're carefully inspected for rips or tears. Any rips or tears are mended on the school's electric sewing machine before the pants are used again.

Football shoes are very expensive and demand the best of care. After the usual drying period, the shoes are cleaned with a wire brush to remove all dirt and mud. Caution must be used in the wielding of this brush, as too much pressure will tear the leather.

Full use is made of both hand and machine brushes. The welts and uppers are cleaned by hand, while the soles and sections around the cleats are cleaned by machine.

After all the dirt is removed, shoe polish is applied. The paste form of polish has proved better than the liquid form, since the paste keeps the leather soft and acts as a water-proofing agent. The shoes are given two coats of polish, with the welts being given the exact treatment as the uppers to prevent water leakage.

A coat of leather-penetrating oil is applied to the soles for two reasons: (1) it keeps the leather from drying out and cracking, and (2) it helps keep grass and mud from sticking to the bottom.

Our leather helmets are brushed with a stiff bristle brush to remove all mud and dirt. Then both the insides and outsides are wiped off with soap and water to remove the perspiration and dirt. Each helmet is then placed on a form to prevent crushing. It stays on the form until approximately a half hour before the next game.

The parkas are made of woolen material; thus dirt and dust adhere to them very quickly. After the game, they're hung up to air out for 48 hours. The parkas are then brushed inside and out with a stiff scrub-brush and lukewarm water. Too much dry cleaning tends to shrink the parkas, especially in the sleeves and in body length.

The stockings are brushed with a whiskbroom to remove dirt and mud. Then they're soaked for 10 minutes and washed for about 15 minutes. Following water extraction, the stockings are dried by artificial heat. There's a slight shrinkage, but stockings aren't too expensive and rarely last more than one season (of game use) because they tend to discolor.

The hip pads and shoulder pads
(Concluded on page 24)

FOR COMPETITIVE SPORTS

Skinner

ONE NAME STANDS OUT!
FABRICS

Boost team spirit and cut costs by specifying uniforms of Skinner fabrics. Your players look better right through the season. For uniform fabrics with stand-out appearance and ability to take rough wear...Skinner!



Look for the Label in the garment that identifies the Skinner fabric of your choice.



Skinner Combat Cloth* Strongest of all Skinner Athletic fabrics. Fast color, light weight, 100% nylon. Favorite for football pants.



Skinner Tackle Twill* fabric. Color and flash, with special stamina for tough wear. Vat dyed, fast color, water repellent rayon and cotton.



Skinner "8217"* The standard satin for basketball trunks, warm-up jackets and softball uniforms. High lustre, vat dyed, fast color, rayon face, cotton back satin.

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Wigwam Socks



The sizes go by the color in the toe



Sock Size	Thread Color
9	Black
10	Green
11	Red
12	Blue
13	Orange

Whatever you want—wear Wigwams. All materials—all weights—all prices.

Soft, springy, absorbent Wigwams, nylon reinforced, provide the all-important foot comfort needed for top performance. And—Wigwams are STA-SIZED* to retain that comfort... no binding, bunching or chafing. Order Wigwams... at leading dealers everywhere.

* Won't shrink below the knitted size.

Hand Knit Hosiery Co. Sheboygan, Wisconsin



ALL WOOL



PART WOOL (Also available with colored tops)



CUSHION FOOT



ALL NYLON

are kept in the players' lockers when not in use. After each game, they're wiped off if necessary and checked carefully for breaks. The pads are kept in the individual lockers because they're used for practice. Since the lockers are made of wire, the pads are well-ventilated and easily dried.

Each player has a section of a shelf in the issue room where his jersey, pants, and shoes are placed after they've been cleaned, in readiness for the next game. The sections are identified by the users' names.

The shoes have name tags on them, while the pants are stenciled inside the belt section with the player's jersey number. A pair of stockings is put in each player's section.

The helmets, still on the forms, are kept in specially constructed boxes. The helmets are numbered with gold decals to correspond with the jerseys. The numbers are placed on the neck of the helmets where the possibility of contact is remote, thus preventing the necessity of frequent renumbering.

After the decal has been put on, a coat of white shellac is applied to prevent the decal from being rubbed off by contact or by cleaning.

The helmets are carried to the playing field a half hour before game time in the same boxes they've been kept in all week. Each player then picks up his own helmet.

The parkas are kept in large boxes which are also carried to the field before the game, and are placed on the bench for ready use by the players.

At the close of the season, all the

equipment is cleaned in the same manner as after every game. All the pants are folded lengthwise and stored on shelves, with moth flakes sprinkled among them. The jerseys are folded with the numbers on the outside.

The shoes, which are still bearing the name tags, are placed heel to toe with the tops of the high cuts folded in to facilitate storing and piling. The shoes of the graduating players are used for practice the following year, since game shoes should be specially fitted, to the individual. New game stockings are purchased each season.

The thigh pads are stored in piles on shelves, with all the lefts and all the rights kept in separate piles. The hip pads are stored on shelves according to sizes, the knee pads are simply stacked and stored, and the shoulder pads are inverted before storing and piled four deep.

The helmets are hung on the regular forms and suspended from the ceiling. The parkas, hung on coat hangers, are also suspended from the ceiling in another section of the room, with moth flakes being sprinkled in the pockets and in the hoods.

From an economical standpoint, it's wise for those concerned with athletic equipment to see that it's properly handled and cared for during the entire season and that it's properly treated and stored during the rest of the year.

Proper storage lends a neat appearance to the room and, more important, aids in taking inventory, ordering new equipment, and issuing equipment.

MOUTH PROTECTION FOR FOOTBALL PLAYERS

THE vital importance of mouth protection in football is clearly indicated by research figures on dental injuries and their costs to colleges and schools.

A survey covering 62 colleges revealed that among approximately 4,000 players a total of 733 teeth were lost, broken or chipped. At L.S.U., a squad of 52 players lost 65 teeth. At the U. of Virginia, one tooth was lost and 40 chipped. North Carolina reported 36 injuries, 30 of them dental; while Wayne U. had 40 dental mishaps.

In Kansas, research data compiled by the Board of Health in Topeka revealed that 97.8% of dental injuries in the state were due to football and basketball. Out of \$7,532 paid by teams for injury treatment, \$5,992 went for football injuries and \$1,059 for basketball injuries.

Alarmed over the incidence of dental injuries, one California high school went to the expense of equipping its players with custom-built mouthpieces. In two seasons, no teeth were damaged, no lips cut, no cheeks lacerated, and no cases of concussion reported. That would lend positive proof that dental injuries and concussion can be drastically reduced by cushioning the shock of a blow on the jaw.

In recent years, several excellent mouth protectors have been developed which do the job perfectly. Designed to fit the individual mouth, they afford perfect protection while permitting enough freedom to talk easily and breathe properly. Colleges and high schools would do well to investigate their use for all football players.

*Floor Space
Costs Money!*

Long Beach City
College Gym,
Long Beach, Calif.



★ Save It With
MEDART
TELESCOPIC
GYM SEATS

● Upper right photo shows main floor and balcony seats open to accommodate capacity audience. Above photo shows seats closed to recover all available floor and balcony space for class use. The other side of gym is similarly equipped with Medart Seats. Here is convincing evidence that a gym built to seat thousands of spectators need be but slightly larger than one with no seating at all—a tremendous saving in cost!



(1) Medart Telescopic Gym Seats are easily opened or closed in a few minutes. Only Medart has the easy-operating "Floating Motion" principle.

(2) Here are Medart Seats closed in below-the-balcony recess. Note how much floor area can be recovered when seats are not required.

Medart Telescopic Gym Seats* make possible huge reductions in building costs by saving the usual "wasted" floor area required for fixed seating. Open, they provide in a few minutes maximum safe and comfortable seating for capacity admission-paying audiences. Closed, they free almost every foot of floor space for daily class use. And the cost is far less than knockdown or built-in seats.

Medart Seat sections, using a self-supporting steel understructure, will safely carry loads of 400 pounds per linear foot per row. Each seat board, foot board and riser is supported by 4 vertical steel uprights that place the live load on the floor where it belongs. Automatic retracting rubber-cushioned rollers protect floors during opening and closing of seats.

Versatile design permits the use of one or more rows as needed. The "Floating Motion" principle provides for easy opening and easy closing. These and the many other features in Medart Seats cost no more but promise extra savings in long service and lower upkeep.

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*Medart Telescopic Gym Seats are fully protected by U. S. Patents.

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Telescopic Gym Seats	Lockers & Wire Basket Shelving	Lockerboxes & Grade-Robes	Basketball Backstops	Physical Fitness Apparatus	Basketball & Football Scoreboards	Physical Therapy Equipment
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A Survey of Physical Education Facilities

By JOSEPH A. GUERRERA

Baldwinsville (N. Y.) Academy and Central School

Student Enrollment	No. of Cases	Gym sizes (Range)			Opinions on Adequacy
		Minimum	Maximum	Sample sizes of gyms where yes was answer	
0-200	6	Minimum 35'	50'	20'	Yes—2
		Maximum 66'	80'	22'	No—4
		Smallest Gym 35'	50'	20'	Sample sizes of gyms where yes was answer 60' x 80' x 20' 36' x 62' x 70'
		Largest Gym 66'	80'	20'	
201-400	43	Minimum 29'	30'	12'	Yes—14
		Maximum 66'	80'	22'	No—29
		Smallest Gym 35'	50'	22'	Sample sizes of gyms where yes was answer 40' x 70' x 22' 50' x 70' x 20' 75' x 82' x 22'
		Largest Gym 66'	80'	20'	
401-600	66	Minimum 30'	48'	14'	Yes—18
		Maximum 72'	94'	30'	No—48
		Smallest Gym 33'	49'	20'	Sample sizes of gyms where yes was answer 72' x 70' x 20' 72' x 76' x 28' 63' x 78' x 20' 50' x 94' x 25' 66' x 70' x 22'
		Largest Gym 72'	76'	25'	
601-800	57	Minimum 30'	55'	14'	Yes—11
		Maximum 80'	100'	30'	No—46
		Smallest Gym 40'	60'	15'	Sample sizes of gyms where yes was answer 60' x 70' x 20' 70' x 76' x 30' 70' x 80' x 28'
		Largest Gym 80'	90'	30'	
801-1000	35	Minimum 40'	60'	14'	Yes—9
		Maximum 80'	108'	30'	No—26
		Smallest Gym 40'	64'	24'	Sample sizes of gyms where yes was answer 60' x 92' x 22' 65' x 107' x 21' 71' x 70' x 25' 78' x 80' x 25'
		Largest Gym 65'	107'	21'	
1000-3510	39	Minimum 40'	60'	19'	Yes—14
		Maximum 95'	110'	30'	No—25
		Smallest Gym 40'	65'	20'	Sample sizes of gyms where yes was answer 75' x 80' x 30' 76' x 83' x 22' 80' x 90' x 26' 84' x 110' x 25' 95' x 95' x 24'
		Largest Gym 95'	95'	24'	

WHEN preliminary plans for the new junior-senior high school in Baldwinsville were being drawn up in the fall of 1949, the writer was asked to submit a list of suggestions for the physical education unit.

This was done. But before submitting them, the writer and his supervising principal, Paul H. Benedict, felt that they should be checked against the facilities then in use at other central schools.

A questionnaire was devised and sent to all the central schools in the state. 269 schools responded. After the information was tabulated, it seemed to be of such practical value that it was brought to the attention of Dr. Caswell Miles, chief of the bureau of physical education of the State Department.

Dr. Miles suggested that a committee of the Central School Principals Assn. be formed for the purpose of organizing and distributing the results.

This committee was promptly organized, and following is its report and interpretation of data. Both have trenchant significance for all high schools contemplating new physical education facilities.

1. Title of person filling out questionnaire:

Principals 90%
Superintendents 1%
Phys Ed personnel 9%

Since 90% of the questionnaires were signed by school administrators (though the actual answers may have been a joint administrator-physical educator undertaking) the facts and opinions that follow may be accepted as representing the views of the school administrator.

2. Do you have a combination auditorium-gymnasium:

Yes: 68.3%
No: 31.7%

3. If you have a combination auditorium-gym, do you recommend such an arrangement:

Yes:06%
No: 99.94%

The reason so many schools (68.3%) have combination auditorium-gyms is due to a state ruling requiring this unit for certain size schools. That this type of facility isn't producing results is proven by the overwhelming sentiment against it (99.94%)—and, remember, most of these men are speaking from experience.

4. What are the dimensions of your present gym facilities: (See accompanying table for answer.)

Judging by the figures in the table, there's been no attempt to adjust the size of the gym to the needs of the school. What's more, little consideration is given to the official rules insofar as the size of the playing areas is concerned.

NEW MOSBY BOOKS

Education Through SCHOOL CAMPING

Teacher education institutions will find in this book a text which can be used in courses such as camping, curriculum, or teaching methods, while it will also serve as a guide to the administrator and classroom teacher who is in service in the school camp program.

The first five chapters offer information on the problems in school camping and their solutions in specific cases, guidance in planning for camp facilities, personnel, and program, and patterns of administration and leadership training.

The next three chapters are unique in that they explain in detail the curriculum in school camping and its importance. Here the administrator and taxpayer are assured that camping is not a frill in education, but a logical vehicle and method of teaching through activity.

The last chapter presents evaluation in a thorough and unusual way, and the Appendix offers a number of charts and plans to facilitate administration.

The experiences of University City Public Schools, Missouri, in providing school camping opportunities, are made available in this volume to others who are interested in initiating similar programs. The firsthand experience of the authors and their personal interest in the development of the program add vigor to the book.

By HELEN MANLEY, Director of Health, Physical Education and Safety, University City Public Schools; and M. F. DRURY, Principal of Jackson Park Elementary School, University City, Missouri. 348 pages, illustrated. Price, \$4.50.

THE RHYTHMIC PROGRAM For Elementary Schools

Planned and produced for classroom teachers and supervisors in elementary schools, Miss Fielder's book will serve as a textbook in colleges and universities for such courses as methods of teaching rhythms in elementary schools. It is a combination of teaching suggestions and material arranged in the order of increasing complexity for maturing children.

Any teacher using it as a text will have a basis for a broad rhythmic program. The material is not highly technical and the music is simple enough to be used by other than proficient musicians.

By GRACE FIELDER, Supervisor of Physical Education, Fort Wayne, Indiana. 270 pages, illustrated. Price, \$3.50.

Direct orders and inquiries to 3207 Washington Blvd., St. Louis 3, Missouri

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NEW YORK

ERRATA COACH HANGS SELF



COACH JOHNSON

ERRATA, I.A.—It was learned today that Roger Johnson, popular coach at ERRATA High School committed suicide.

Johnson left a note stating, "The life of a coach is too precarious. Not only does he have to win games, he must also use caution in buying equipment. I didn't."

Johnson, it seems, used the funds raised by the student body to buy a new scoreboard. Somehow he erred and bought a "hard-to-read" dial-type clock board.

When the Errata team played the neighboring school, Pleb, who had just bought a new "Tick-a-way" clock scoreboard, the fans were enraged. Coach Johnson, rather than meet the mob, took his life.

If you have made the same mistake, write today for a free rope complete with noose. Or, if you wish to avoid a tragedy, ask for information about FAIR PLAY SCOREBOARDS.

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Pep up your school's basketball program with a scoreboard you can read at a glance. Surveys show Fair Play Figurgrams are eight times easier to read, faster and more accurate than dial-type scoreboards.

No need for an elaborate installation... your own building department can install and service Fair Play. Help your team. Write today for information about

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8

TIMES
FASTER



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In many cases, the height of the gym is rather excessive (ranging from 12' to 30') and raises an interesting question: Wouldn't it be feasible to plan lesser heights and use the money thus saved to increase the size of the playing surface?

Since 178 of the administrators believe their present gyms are inadequate (refer to question No. 10), it's apparent that a study of this type was needed and can be used to advantage in formulating recommended building standards.

5. Do you have an individual corrective room:

Yes: 4.96%
No: 95.04%
Average size—19' by 24'

Only a small number of schools have special corrective rooms. If this type of instruction is deemed essential, facilities should be provided in all schools. A desirable size teaching station might serve a dual purpose—corrective physical education and certain extra class activities.

6. Do you have a swimming pool:

Yes: 2.3%
No: 97.7%
Average size—79' by 38'

Through centralization, more school districts could extend their educational programs to include the teaching of one of life's essentials—the ability to swim. Safety, survival, and physical fitness are three of the many objectives attained through a swimming program.

7. Do you have adequate physical education storage facilities:

Yes: 17.6%
No: 82.4%

Adequate storage areas relieve the teacher of many tensions, add life to the equipment, and make for a safer and more attractive play area. Too many schools fail to provide large enough storage space.

8. List all other physical education or recreational activity rooms within the school:

Bowling ... 2% Ping pong .. 3%
Wrestling .. 4% Shuffleboard 1%
Rifle range . 9% No others .. 60%

Few auxiliary areas for physical education and recreational activities are provided. If such activities as correctives, wrestling, riflery, fencing, dance, etc., are integral parts of the total program, then space should be provided for them. These extra teaching stations are particularly needed during peak load periods.

9. In what year were your present gym facilities completed:

1906-1910 .38% 1941-1945 4.15%
1911-1915 .76% 1946-1950 4.19%
1916-1920 .76% 1950-1951 .38%
1921-1925 4.15% incomplete .38%
1926-1930 23.02% no facil. 2.06%
1931-1935 19.62% unknown 5.06%
1936-1940 35.09%

The fact that 29.07% of the schools were built before 1930, 54.71% between 1930-40, and 8.34% between 1940-51 indicates the need of a big

building program to accommodate the huge student growth. It also intensifies the need for aid in planning facilities.

10. Was the gym adequate when completed:

Yes: 71.6%
No: 28.4%
It is now:
Yes: 25%
No: 67%
No response from others

The fact that 28.4% of the schools weren't adequate when completed and that 73.4% aren't adequate today indicates a great lack of vision in planning.

11. Who or what was the deciding factor in determining the size of the gym (number of responses, 367):

State education dept. (building and grounds) 21%
Cost 17%
Unknown 16%
Enrollment 12%
Architect 11%
Board of Education 8%
Principal 5%
Program (Basketball) .. 2%
Staff 2%
All others 6%

The responses indicate practically no influence from local staffs or lay groups. The most frequently cited influence is the state education department (21%) and the architect (8%). If facilities are to be functional and adjusted to local needs, procedures and standards should be recommended to guide local planning committees.

12. What suggestions would you make to anyone building a gym now:

80 recommend separate gyms
75 recommend folding bleachers
95 recommend folding doors
25 recommend corrective rooms
60 recommend adequate storage
20 recommend drying rooms
12 recommend phys ed offices
10 recommend that phys ed plant be separated from rest of plant

MOBILE BLOCKING APRON

SCHOOLS with limited funds can build a highly efficient blocking apron for dummy scrimmages. Designed by Homer Weis, coach at Red Oak (Iowa) H.S., it consists of an inner tube and two belts. When the tube is cinched together with the belts and inflated, it assumes an ideal blocking cup.

The defensive player simply grasps the belts on the back side of the tube and holds the unit out in front, forming a target for the blocker.

The entire unit weighs only about four pounds and affords wonderful protection and easy handling. It is being used with excellent results by Coach Weis.

—The First Aider

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Made of Rayolene. Knit rayon outside for appearance and wear, lined with strong white knit cotton fabric for bulk and warmth. Processes perfectly.

376 Warm up Shirt. Double thick Rayolene with solid color ribbed Durene knit trim. All colors and combinations to order. Sizes S-M-L. Each.....**\$3.85**

376/TP Warm Up Pant. To match 376. Cord waist and elastic bottom. All colors to order. Sizes S-M-L.....Each **\$4.00**
Extras on 376/TP... Zipper Bottoms, per pair.....**50c**

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76 Sleeveless. Lustrous rayon with cotton back. All colors to order. Sizes 34-44.....Doe. **\$14.40**

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84Q5 Quarter Sleeve Jersey in Colors. These colors in stock for immediate delivery: Royal, Navy, Scarlet, Maroon, Kelly, Dark Green, Gold, Gray, Purple, Old Gold, Black. Sizes S-M-L.....Doe. **\$9.40**

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1000 Elastic Top. Light weight cotton. Sizes 10-13. Doe. **\$2.15**

11T Elastic Top. Medium weight cotton. Sizes 10-13. Doe. **\$3.00**

J Heavy weight cotton. Nylon reinforced toe and heel. Sizes 9-13.....Doe. **\$4.90**

K Medium weight cotton. Nylon reinforced toe and heel. Sizes 9-13.....Doe. **\$4.50**

8 Heavy weight. Wool, nylon, cotton, rayon construction. Colored toe stripe for size identification. Sizes 9-13.....Doe. **\$5.50**

100 All new construction. 50% nylon, 50% wool. Sizes 9-13.....Doe. **\$4.00**



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Over 12 Doe. **\$4.20/Doz.**
In Bulk Doe. **\$4.00/Doz.**

#59 1" Elastic web waist. Mesh pouch. Sizes S-M-L. Doe. **\$4.00**

More universities, colleges, high schools, and track clubs use Champion Track Uniforms because they are high in quality, moderate in price, long wearing and good looking. Champacraft and Aridye processing add to these many advantages.

WITH EXTRAS



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K8J White Only. Elastic 1 1/4" triple stitched boxer waist. Full cut, 4 piece "Sanitized" cotton twill. In stock for immediate delivery. Sizes XS (24-26) S (28-30) M (32-34) L (36-38) XL (40-42). Plain.....Doe. **\$7.80**

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K8/4 Full cut, elastic 1 1/4" triple stitched boxer waist in lightweight lustrous celanese satin. White and these colors only to order: Royal, Scarlet, Maroon, Kelly, Gold, Purple. Sizes 34-36. Plain.....Doe. **\$18.40**

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EXTRAS ON PANTS: Split Sides, per pair, 10c;
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55/0 Sweat Shirt. Silver Gray. Heavy weight 26 gauge fine tight knit. Full cut. Heavy ribbed neck, cuffs, bottom. Sizes 30-46.....Doe. **\$34.90**

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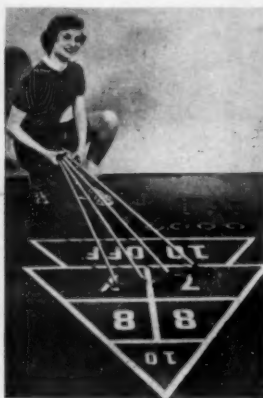
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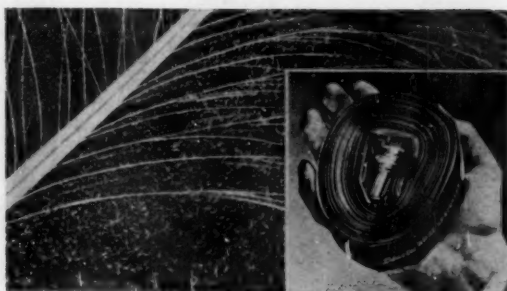
• **SPONGE PLASTIC PADDING.** Coming in sheet form, about 40" x 50" and $\frac{1}{2}$ " thick, this new material absorbs shock with minimum rebound. Produced by Sponge Rubber Products Co., it can be scissored into whatever shape is needed.



• **UNIFORM BAG.** Designed to hold a complete football uniform, the National Sports Equipment team bag is 25" long x 15" in diameter. Made of vylan duck (both mildew and water proof), plastic coated for extra life, and is washable. Full length zipper, with end seams vinyl welted. Similar 10" x 22" bag is available for basketball.



• **INDOOR SHUFFLEBOARD.** Only two-thirds as large as regulation outdoor set, the new Dimco-Gray indoor unit can be used on any 30' area. Consists of 8 plastic discs (4 red, 4 black) and 4 aluminum-handled cues. Absolutely weatherproof, the set may also be employed outdoors on reduced-size courts. Official rules of game are included with the set.



• **PLASTIC SPRINKLER.** The double, lightweight Andrews Plastic Sprinkler can spray an area more than 12' wide by 50' long at average water pressure! Weighs just 1 lb. and can be shaped to any contour. Turn it over and it becomes a socker! Won't rot or mildew.



• **INFLATING NEEDLE.** MacGregor Goldsmith's new inflating needle comes equipped with a capsule stuffed with wool felt saturated with glycerine. Latter serves to lubricate valve and prevent valve trouble. Vertical unit above shows needle inserted into glycerine-containing capsule.

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YOUR BASEBALL EQUIPMENT

• BUDGET

IN these days of rising costs, athletic budgets are being scanned pretty closely and where the pressure sports (football and basketball) aren't paying off, baseball and other spring sports are often being curtailed.

Even the more affluent schools seldom allot any great sum to baseball. And since the sport is rarely self-sustaining, it behooves the coach to exercise the shrewdest judgment in the purchase and care of equipment.

According to a personal survey, Pennsylvania high schools allot approximately 40% of their athletic budgets to football, 20% to basketball, 12% to baseball, 10% to track, 8% to wrestling, 5% to soccer, and the balance to other so-called minor sports.

Using these figures as a guide, several model budgets may be designed—with particular stress on baseball—for the various enrollment groups.

1. Less than 300 enrollment—three sports—\$1500 budget—approximately \$180 or 12% to baseball.

2. Enrollment of 300 to 600—four sports—\$3000 budget—approximately \$300 or 12% to baseball.

3. Enrollment of 600 to 1200—five sports—\$6000 budget—approximately \$700 or 12% to baseball.

4. Enrollment of 1200 to 2000—six sports—\$8000 budget—approximately \$900 or 12% to baseball.

5. Enrollment over 2000—more than six sports—\$10,000 budget—approximately \$1000 or 12% to baseball.

At Upper Darby, our pupil enrollment ranges around 1600. We support two organized teams—a varsity and a junior varsity. Out of the 200 kids who come out for baseball every year, we keep about 30 on the eligibility list for the varsity and about 40 for the jayvees.

The baseball budget comes to about \$600, with the greatest amount

going to the varsity. The varsity plays an 18-game schedule and the jayvees a 10-game schedule.

Three men do the coaching. Fortunately for the boys, they're all baseball coaches and hence don't consider baseball just another extra-curricular activity. Perhaps that's one of the reasons for our success.

But coaching is only half the battle. Here are some other vital points that must be kept in mind in running a baseball program:

PROGRAM SUGGESTIONS

1. Keep an accurate record of all expenditures.

2. Institute a card system whereby every player is held responsible for his equipment.

3. Make managers responsible for bats, balls, and bases.

4. Detail the expenditures within the budget.

5. Make allowance for repairing and cleaning equipment.

6. Advertise and run the budget in a businesslike manner.

7. Send a copy of requisitions and inventories to the treasurer of the athletic association.

8. Secure bids on all equipment orders over \$100.

9. Have the athletic director or principal approve all requisitions over \$50.

10. Don't buy cheap equipment—it doesn't last.

11. Know exact specifications you want in standard brands and insist on them when putting out bids.

12. Buy equipment that affords maximum comfort and protection.

According to coaches, about five-eighths of the baseball budget goes for equipment. All equipment, including uniforms, should be bought for the varsity. As the equipment ages, it can be handed down to the jayvees and junior high (if the school is on a six-year plan).

If the junior and senior highs are separate entities, the junior high

should be expected to have its own varsity and jayvees. But the same rule applies—the varsity gets the new equipment.

I find that good grade flannel uniforms can, with careful handling, last four or five years. Since the pants usually wear out much faster than the shirts, they'll ordinarily have to be replaced first.

It's a good idea to have the players practice in old clothes, saving their uniforms for the games. Aside from saving wear and tear on the uniforms, this practice saves valuable time in dressing and also serves as a sort of game harbinger: Whenever the players appear in uniforms, everybody passing by immediately knows that a game is scheduled.

After the final game, all the equipment should be collected and the index cards returned to the players. Very little equipment will be lost this way. The uniforms should immediately be sent to a reliable cleaner, where they should be cleaned, repaired, and stored until the following spring.

I generally collect all junior varsity uniforms the week before, then phone the cleaners, instructing them to pick up all the equipment the day after the last varsity game.

Following are some hints on selecting the equipment:

Get fast colors that won't run or fade.

Make sure the uniforms fit fully and are larger than necessary to allow for shrinkage over the years. A full fit also serves as protection against easy tearing.

Have large numbers on the backs of all shirts, and small matching numbers on pants (near belt).

Reinforced knees and crotch will add to the life of the uniforms.

Buy heavy wool sweatshirts for the protection of the arms and shoulders in early spring.

Get jackets that are warm, not merely fancy or flashy.

(Concluded on page 52)

**"VARSITY
or J. V.—
they all prefer**



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All-Purpose Seating

FIXED permanent seating is rapidly becoming passé in our gymnasiums. Protruding upon a large portion of the available floor space, it hardly conforms to the principles of economy and utility.

Folding or telescoping seats represent the modern way of seat-treating a gym—both on the ground floor and in the balcony. They come in rows, from 3 to as many as 20. The standard section is usually 16' long, but 8, 12, and other lengths up to 16' are available.

How much space do these folding seats actually save? Take a 10-row section, for example. When open, it extends about 18' into the gym. When closed, it takes up only about 3'. It thus saves you 15' of floor space! The folding seats do not have to be completely pulled out—1, 2, or as many rows as needed may be used.

Many new gyms are being planned with folding seats on a balcony running the length of the gym or along one end. By using folding rather than permanent seats, space is made available in the balcony for physical ed and other activities.

Folding seats, when closed, have a smooth wooden surface. In some gyms, they recess into a wall and are thus completely hidden (when closed). Where the seats aren't recessed, end enclosures are available.

The folding seats rest on small hard rubber wheels, designed not to mar the gym floor. The seats roll out easily and it's simple for one person to pull out a section.

Though it's often unwise to plan a gym with seating at both ends of the ground floor, extra seating is frequently needed here for important games or tournaments. This need may be filled by a type of folding gym seat which can be easily moved when closed, and stored (when not in use) in a side room of the gym.

MANY types of seating are available for outdoor areas. Portable wooden bleachers are used where cost is a problem and seating capacity is small.

Portable wooden units usually come in 15' lengths. Though from 2 to 25 rows are available, a large number of rows isn't ordinarily used since it would affect the portability of the bleachers.

This type of seating shouldn't be confused with the kind of wooden

INDOOR AND OUTDOOR

bleachers often put up by local carpenters. The portable units in question are manufactured by specialists and designed to withstand all loads and stresses.

Another type of portable bleacher is the portable steel unit. It differs from the wooden bleachers in that the supporting structure is of steel. The seat boards and the floor boards are, however, of wood.

Designed for easy dismantling and portability, they can be taken from the football field to the baseball field, or even set up in the gym when additional seating is needed.

Portable steel bleachers come in various section lengths—15', 12' (which is standard), and shorter sections. From 3 to 20 tiers of seats may be obtained. The distance between seats varies. The shorter the distance, the more the seating capacity; and the greater the distance, the less the seating capacity but the greater the spectator comfort.

A type of portable steel unit is available in which the first row of seats is elevated above the ground. This affords the spectators in the front row better visibility and al-

lows for a walk-way the length of the bleachers, affording easy access to the seats. When a number of sections are placed together, aisles are also provided, as well as side rails for the ends and back rails behind the last row of seats.

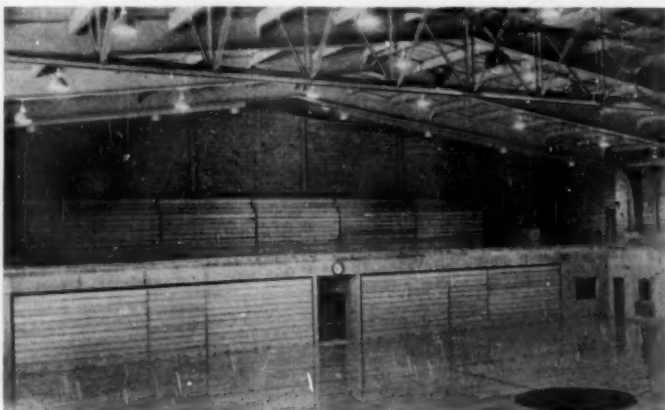
Permanent steel bleachers are used in the stadium type structure. This seating unit is set on concrete piers or concrete strips set in the ground. It can be of the conventional or elevated type, or designed with various types of entrances and exits.

Ordinarily, permanent steel grandstands provide more spectator comfort. When additional seating is necessary, steel units can be added to the ends or additional rows can be affixed to the back.

Another type of grandstand is the steel deck unit. The deck here is made of steel and is completely waterproof. As a result, the stand may be built as a closed stadium by using brick or masonry walls at the ends and back.

Steel deck grandstands come in small sections and may be built to accommodate hundreds or many thousands. Spectators don't sit on the steel deck but upon wooden seats raised several inches from the deck.

Literature is available on all the seating types mentioned. It will be promptly sent to you upon receipt of a letter containing a rough idea of your school's future needs. Write Scholastic Coach, 351 Fourth Ave., New York 10, N. Y.



How folding bleachers on the main and balcony levels afford maximum playing space (when closed) and maximum seating capacity (when open).

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While football coaches and players were suffering their most disastrous football season in history, from the standpoint of fumbles, in 1952, Wilson research and technical directors were bringing to a climax their labors of several years to develop a football that would reduce fumbling to a minimum. The results are now ready for you!

It is with genuine pride in the advancement of athletics that Wilson announces the new, exclusive Grip-Tite process—your assurance of a football that guarantees you the maximum in feel and gripping tenacity in every kind of weather. With Grip-Tite, no type of climatic conditions can affect the playability of your Wilson football.

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exclusive Wilson process adds water repellency to the other superior playing qualities of your leather football. Grip-Tite is a part of the original tanning process developed right into the ball, so there can be no absorption of moisture.

Your kickers, passers, receivers and ball handlers can use the famous Wilson WR and THE DUKE with complete confidence...they're Grip-Tite!

TEAMWORK...Progress for you...through the combined efforts of (left to right) Coach Bob Vaigts of Northwestern; Wilson Research Director John G. Harvey; Chicago Cardinal and former All-American backfield great from Georgia, Charley Trippi; Wilson President F. J. Bowman; Present Backfield Coach and all-time All-American of Notre Dame, Johnny Lujack; and Wilson Vice-President Wm. F. King.

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National Federation News

Harvard
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SEVERAL state high school associations, including Iowa and Kansas, will use a pair of glass backboards in their state-sponsored basketball tournaments. These boards are made of tempered glass mounted in a steel frame. The glass won't crack. If it should break, it will disintegrate into small pieces which cannot cause injury to any player.

The goals are mounted on the front of the board, with two bolt holes extending through the steel frame. This eliminates any danger from a falling goal.

Tempered glass has been widely used in the construction of glass doors and glass auto windshields. Laboratory tests indicate lifetime durability. While there's little chance of breakage, no guarantee is made on any glass product. For those desiring 100% protection, glass insurance is available at small cost.

TRACK AND FIELD

The 1953 track and field rules book is now being distributed. It contains all the new records, results of the 1952 state meets, and the latest edition of the rules. The more interesting rule changes follow:

1. The list of Officials now includes a Hurdle Chief and Assistants.
 2. Provision is made for tie heats when qualification for the next round is involved. Whenever possible, all boys involved in the tie should be advanced to the next higher qualifying heat. If a shortage of lanes prevents this, the tied athlete shall run a special heat to determine the qualifiers for the next higher heat.
 3. Rule 9-1 now contains more specific information on the most desirable number of competitors for preliminary trials in the broad jump, shot put, discus throw, and javelin throw.
 4. The minimum width of the broad jump pit has been extended to 9 feet (from the former 6 feet).
 5. To safeguard against hurdles which are too heavy for safety, a maximum overturning force is now specified—consisting of a minimum of 8 lbs. and a maximum of 8 lbs. 13 oz.
- Two new national interscholastic records appear in the 1953 book. In the 120-yd. hurdles, Bill Curtis of Waurika, Okla., joins Lee Miller of San Antonio, Tex., and Joe Batiste of Tucson, Ariz., with a 14 sec. clocking. In the shot put, the new record holder is Leon Patterson of Taft, Calif., with

a mark of 60 feet 9 $\frac{1}{2}$ inches.

Wyoming is adding a 440-yd. relay to the list of events in state-sponsored meets. A contestant will be limited to a maximum of three running events, with no more than one of them longer than 220 yards. One relay may be run in addition to the running events.

Idaho has substituted a football throw for the javelin throw in its state-sponsored meets.

New York places rigid limits on the number of events in which an athlete may compete. No more than one race of 440 yards or longer may be entered by an athlete.

In an attempt to improve the eating habits of high school athletes, the Iowa H. S. Athletic Assn. has cooperated with the state department of Health in producing and distributing a small folder containing suggestions for the diet of a high school athlete. These pamphlets are being distributed to the schools and to the parents of high school boys.

The safety and equipment committees of the National Football Committee, acting in cooperation with manufacturers' representatives and athletic benefit groups, are studying ways of reducing injuries. Items receiving attention are proper protection of teeth through use of a rubber mouthguard and further developments in a type of plastic which it is claimed, absorbs shock better than any other padding material devised to date.

At a recent meeting of the Wyoming H. S. Athletic Assn., it was voted to change the name to "Wyoming School Activities Association." The program of the association is being broadened to include a degree of supervision over music and literary activities and over activities in the elementary and junior high schools. Secretary J. F. Jiacoletti is in charge of the state-wide work which applies to all of these activities.

At a recent meeting of the Indiana H. S. Athletic Assn., it was voted to include in the amateur rule a specific statement that the signing of a professional contract by a high school boy automatically terminates his eligibility for high school athletics. At the same time, the group voted to rescind several liberalizing rules which apply to try-outs and similar activities if and when the present high school contract regulation is terminated by Professional Baseball.

If the present high school regulation is extended, the Indiana rescinding action won't be considered necessary and will be automatically canceled.

Think of Spectators' *Comfort*

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Universal Roll-A-Ways Provide More Leg Room Than Any Other Leading Stands

When selecting or specifying gymnasium stands, it is quite natural for you to favor those which provide maximum seating in minimum space. But what about the spectators? Are you considering their comfort? Cramped seating facilities don't encourage big turn-outs for basketball games or other events.

However, this need not be a problem. With *Universal Roll-A-Way* Stands you can meet all demands . . . for comfort as well as maximum seating in minimum space.

Thanks to improved design and construction, Roll-A-Ways provide more leg room than any other leading stands. The extra distance from seat board to foot board (18½") and the centered position of vertical filler board beneath the seat permit every spectator to keep his feet and

legs in normal position (illustrated at right). Continual comfort is assured.

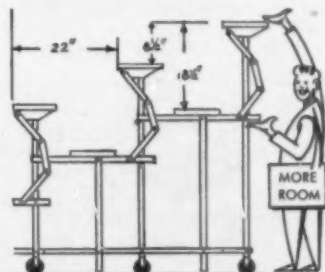
Universal Roll-A-Way Stands are engineered to individual specifications, fit any space, and afford perfect visibility. When not in use, they may be rolled back to the wall, opening approximately 70% more floor space for regular gymnasium activities. They are ideal for large capacity or small; neat and attractive; exceptionally strong and safe.

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SELECTS *UNIVERSAL* Roll-A-Way Stands
have just been installed in the large new
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Notice the natural, comfortable position of this man while seated on *Universal Roll-A-Way* Stands. The extra distance from seat board to foot board and the centered vertical filler board mean maximum space per spectator. See detail drawing below.



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Three Ingenious Aids

MAGNETIC GRID BOARD

By LOU HOWARD

Asst. Coach, Amityville (N. Y.) H. S.

CONFUCIUS once said that "One picture is worth 1000 words." Assuming the ancient sage was right, why not make your football lecture sessions, whether on the field or in the locker room, more meaningful by the use of a homemade magnet board?

Let your players see where they should be or who to block on each play. Once a player visualizes his assignment, it will remain fixed in his mind.

You can make a magnetic football board from odd pieces of equipment

that are lying around or which may be had for the asking.

The first item should be a metal sheet or sign approximately 60" x 36". The local service station has numerous signs of this type. Have your shop students convert the sign into a gridiron by spraying it with a silver coating and painting the lines black. Supporting legs may be attached as shown.

Your next problem is to make "players." This is accomplished by obtaining 22 bottle caps. (The tops of various instant coffee containers are ideal.) These make up your offensive and defensive teams. If your school colors are, let's say, red and grey, paint one "team" grey and the other red.

The positions are identified by cardboard letters pasted on each cap.

These letters may be cut out by your art department or purchased from any art supply dealer.

The letters on the grey caps should be a contrasting red, while those on the red caps should be grey.

We also find it advisable to number the offensive backfield 1, 2, 3, 4—and identify the defensive team with the letters F, H, H, S, (fullback, halfback, halfback, safety). Both lines are lettered E, T, G, C, G, T, E.

Your last major problem is to get the caps to stick on to the metal sheet. This probably will cost a little money. Consult the classified section of your local telephone book and find out where small magnets may be purchased.

Your local radio store will most likely be able to give you this information. Novelty stores also might sell small magnets. The usual price is approximately 10¢ per magnet. The magnets are attached to the inside of the bottle caps by means of liquid solder.

I believe you'll readily agree on the practicability of this board as you instruct your squad. . . "Jones, on this play you go in motion to the right like this." As you say this, you move Jones outside the defensive end in the desired spot. "Ryan, you get behind the defensive right halfback." Immediately, Ryan is placed where you may expect him to be on that play.

We've also used our board for basketball by marking out the free-throw lane with adhesive tape.

BASE FASTENER

By BERNARD EVANS

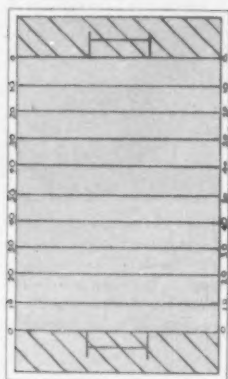
Author, "Defensive Baseball" Chart

If you're tired of hunting for the base pegs every time you float your infield, here's a remedy in the shape of an improved method of securing bases.

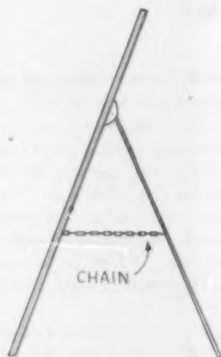
Instead of "pegging" down your bases, you can anchor them to wooden blocks set in the ground. These blocks can be easily made by any maintenance man or shop department.

The local lumber mill or school shop teacher can recommend the best type of wood. Once the wood is procured, the next step is to make three blocks about 4" thick and 15" square on top flaring out to 20" square at the bottom (see illustration).

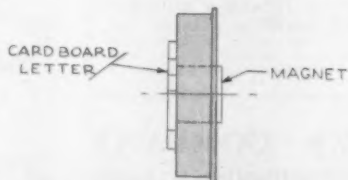
If you can't obtain lumber of this size, you may secure the necessary thickness by building up layers of



FRONT VIEW



SIDE VIEW



Components of the practical home-made magnetic board.

Niagara Massage Speeds Recovery of Injured Players

**Reduces and prevents injuries, relieves nervous
tension, loosens taut muscles, helps prevent
muscular atrophy after injury**

NIAGARA of Adamsville, Pa., has developed a unique and highly efficient line of mechanical massage equipment. A radically designed, patented motor develops a revolutionary three-way (horizontal-vertical-circular) mechanical pulsation. This action is an invaluable aid in stimulating circulation to aid in the healing of sprains, fractures, charley horses, and many other bone and muscle injuries.

After a season's testing of Niagara equipment at Massillon (Ohio) High School, Football Coach Chuck Mather stated, "We had fewer injuries this season than any I can remember." (Not a single Massillon player missed a game because of a charley horse!)

Howard Waite, Trainer, University of Pittsburgh Panthers, is a pioneer in the use of Niagara Massage as a general conditioning aid and as a method of reducing

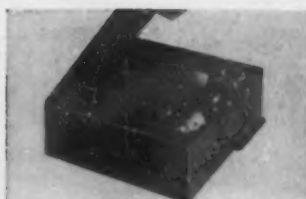
injured time among his athletes. Mr. Waite uses two Niagara Portable Sets, an Orthopedic Adaptor, and a Triple Table.

Dr. Harrison J. Weaver, of the St. Louis Cardinals, has experienced outstanding success with Niagara equipment in speeding the healing of fractures and certain types of spinal injuries.

The Niagara Hand Unit and the All-Purpose Cushion are sold together as a portable set. This can be used right at the players' bench where it is available for use on charley horses, sprains, etc., the instant they develop!

The Orthopedic Adaptor is an accessory to the Hand Unit. It applies soothing, beneficial massage direct to injured elbows, knees, wrists, ankles, etc.

Prices of Niagara Mechanical Massage equipment are surprisingly reasonable when compared to other therapeutic equipment.



PORTABLE SET consists of Niagara Hand Unit and All-Purpose Cushion.



RALPH KINER demonstrates how he uses his Portable Niagara Massage Set to loosen taut muscles and ease pre-game tension.



ORTHOPEDIC ADAPTOR used with Hand Unit for spot massage on injured elbow, knee, wrist, ankle, etc.

The 2-Unit Portable Set (Hand Unit and Cushion) sells for only \$159.00. The Orthopedic Adaptor, a "must" for every trainer, is a mere \$22.50. The large professional Triple Table is \$515.00.

More and more of the top athletic teams are recognizing the value of Niagara equipment as a wonderful conditioning aid. If you, too, are interested in equipping your teams with the finest in massage equipment, write to Niagara, Adamsville, Pa. You may send coupon, below, for further information or to place an order.



TRIPLE TABLE for all-over massage. Cushions adjust to fit contours of body.

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**Converts open spaces
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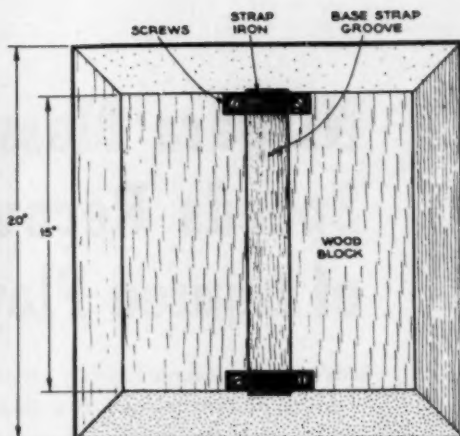
- ✓ All steel for safety and durability
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- ✓ Two goals—one on each side

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This wooden block is placed in the ground a half inch below the surface where the bag is set. The base is secured by running the strap under one strap iron, along the groove, under other strap iron, and then back to the base.



TOP VIEW

thinner material using weldwood or similar waterproof glue.

Along the top of each block, cut a groove $\frac{3}{4}$ " deep and $\frac{1}{4}$ " wider than your base straps. Then, at each end of the groove, screw on a piece of $\frac{1}{4}$ " by 1" strap iron 4" long. Use flat head screws to attach these iron pieces flush with the surface. If your bases have two straps, make two grooves crossing in the middle of the block.

The next step is to treat the wooden blocks against rotting and then set them into the ground about $\frac{1}{8}$ " below the areas on the diamond where the bases go.

The center of the groove for the first and third base blocks should be $7\frac{1}{2}$ " inside the diamond, parallel to the baselines. The block at second base should be centered at the intersection of the baselines from first and third, oriented in such a manner that one corner of the base points to center field and the opposite corner toward home plate.

You can now secure the bases. This can be done simply and effectively by running the strap under the piece of strap iron, then along the groove and under the other strap iron and back to the base.

This will definitely fasten the bases into place and hold them exactly where they should be.

You'll probably need a tool to clean the debris from the grooves once in a while. An effective cleaner may be made by welding a piece of $\frac{1}{4}$ " key stock (slightly shorter than the width of the groove) on the end of another piece of stock used as a handle. Run this device through the groove and all the dirt will come out.

STARTING PISTOL

By **VERNARD B. HICKEY**

California College of Agriculture

A REVOLUTIONARY type of starting pistol has been developed by William Kroeger, equipment manager of the California Aggies of the U. of California. Used with great success at many high school and college meets on the Pacific Coast, it consists of a starter's gun and flash bulb.

The bulb is attached to the gun, which possesses a double firing pin. Pressure with the finger causes a simultaneous explosion and flash. All timers and starters employing the new device have been enthusiastic about it.



Bang-flash! and away we go!

10,000 safe,
permanent, comfortable seats
for TROY, Ohio
sports spectators



Steel press box, with windows covered for between-season protection.

North Stand, 5,000-seat capacity, 30 rows deep, 270 ft. long.



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Telescopic hurdle in low (left) and high (right) positions

Make Your Own Track Equipment

By COLLIE J. KIDWELL, Track Coach, Hilmar (Cal.) H. S.

DO you have enough money in your track budget to buy your hurdles, starting blocks, shot-put stop-board, broad-jump take-off board, and high-jump and pole-vault standards?

If you have, then go ahead and buy them by all means. The manufacturers who specialize in these items will supply you with the best of equipment that will last for years.

If you're situated in a small school, however, the answer to the above question may very well be "no." Then you will have to improvise—just as we did at Hilmar several years ago.

We began our track rebuilding program immediately after the football season. This early start was necessitated by three factors: (1) we had very little track equipment to begin with, (2) we wanted to restore track to "major" status, and (3) we were planning to hold some home meets for the first time in years.

After making a complete survey of our available equipment, we found that to accomplish our objectives we'd have to start from scratch and rebuild everything. So we turned to our workshop instructor and his classes. And the miracle began.

Hurdles. Through the fine cooperation of the instructor and his boys, we were able to turn out 40 hurdles for a little more than \$80. We were fortunate in that we were able to obtain the material for the uprights from a nearby creamery. Our biggest expense was the nuts and bolts.

To save time, the hurdles were turned out on a mass production

basis. They were cut out in three steps: (1) the cross-pieces, (2) the uprights, and (3) the bases. The next step was the drilling of holes for the bolts. From there, we progressed to the assemblage of the hurdles.

A standard-size telescoping hurdle was used as a pattern. Not having a hurdle of this type, we were obliged to use a picture for a guide and to estimate the measurements. After assembling the first hurdle, we found that our estimated measurements were in line with the dimensions set forth in the Track and Field Guide.

In its normal position, the hurdle was set at 30" (for low-hurdling). To prepare the piece for high hurdling (39"), the inside cradle was pulled up and locked into position by inserting two pins through the two uprights.

In line with our standard coloring scheme—red and white—for all track equipment, we painted the base of the hurdles red and the inside cradle white, with black lines on the top crossbar, as shown in the accompanying picture.

Following is the breakdown of the total cost of our hurdles: Nuts and bolts, \$50; lumber (cross-pieces), \$31; paint, \$2.50. That adds up to \$83.50. In short, our 40 hurdles cost us \$2.10 each!

High-jump standards. Our jumping and vaulting standards, though homemade, also complied with the official stipulations—and they cost us nothing!

We obtained from our maintenance man two pieces of 2" water pipe 3'6" long and two pieces of 1 1/2"



Pole-Vaulting Standard



Adjustable Starting Block



Shot-Put Stop-Board

pipe 3'6" long. On the 1 1/2" pipe, we drilled 1/4" holes the whole length of this inside riser. Then a metal plate 1 1/2" by 2 1/2", as stipulated by the rules, was secured on top of the riser bar.

For the base, we used two metal discs one foot in diameter—which also were obtained from the maintenance man. The inside riser was held in place by a key placed through the two pipes.

The base plates and the outside risers were painted red, while the inside risers were painted white.

Pole-vaulting standards were made out of two-by-fours placed in a manner so that a two-by-two could be inserted inside as the inside

riser. The bases were made out of 24" by 24" cement blocks.

On the outside standards, we cut a 1/4" slot and placed a 6" pin into the inside riser. This enabled us to adjust the inside riser up and down. The inside bars were held in place by pins extending through both standards.

Here again we used a red and white color motif, painting the bases and outside standards red and the inside risers white.

Shot-put stop-board. This piece of equipment was the simplest and the least expensive to make. The only cost was for a piece of hardwood used for the top. We took scrap pieces of one-by-fours and glued them together, staggering all the joints to give the board extra strength. The 3'6" radius was cut out on the band-saw.

After the one-by-fours were cut, the strip of hardwood was glued on. Several wood screws were added to the glued strips of one-by-fours to make sure they wouldn't come loose. The base was painted red and the hardwood strip white.

Broad-jump take-off board. Here again we saved money by using pieces of scrap lumber. We glued pieces of one-by-fours together, then glued a 1" by 8" by 4" hardwood piece on top.

Actually, the only cost involved in the construction of both these boards (shot put and broad jump) was for the glue and the two pieces of hardwood. The cost of these two items was \$2.50—which isn't bad for a couple of items that'll last several seasons!

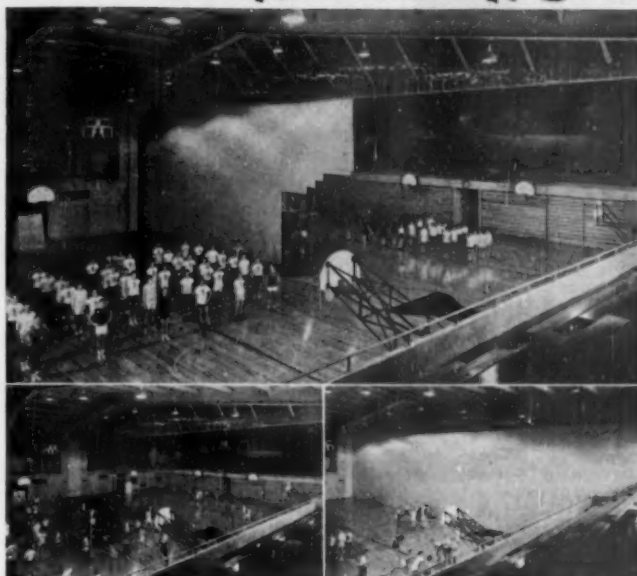
Before placing the take-off board into the ground, we soaked it in linseed oil and then gave it several coats of white paint.

Starting blocks. We used hardwood in the construction of our blocks. The stems were made out of 2" by 4" pieces of maple 33" feet, while the blocks were made out of walnut, 4" by 6". The face of the blocks was cut at a 45° angle.

The blocks can be adjusted to any distance the runner desires by loosening a wing nut and sliding the blocks backward or forward. On top of the stem we graduated a scale (in inches) so that once the runners worked out their proper position they'd always know just where to set their blocks.

These blocks could be used by either left- or right-footed starters. The blocks were held in place by two pins, one at each end of the stem. The total cost for this kind of block came to \$2. The stems were painted red and the blocks white.

Take a tip from Hinsdale High!



Childs and Smith, Architects

Stretch both space and appropriation with FoldeR-Way® Automatic FOLDING PARTITIONS by Richards-Wilcox

In these photographs taken at Hinsdale Community High School, Hinsdale, Ill., you can readily see how Richards-Wilcox FoldeR-Way folding partitions provide greatest flexibility to given areas of space. You can see how the partitions close to isolate the boys' and girls' gym classes from each other. Also, how the FoldeR-Way partition opens for conference games, and similar events, making the complete gym one vast playing arena and gallery.

But you can't see these EXCLUSIVE FEATURES:

1. **Fully Automatic.** All folding, unfolding, locking, unlocking, and sound-proofing operations are accomplished by the electric operator and its auxiliary mechanism. You merely turn the switch—R-W does the rest.
2. **Positive, Silent Action Roller Chain Drive.** Will not slip, stretch, or break.
3. **Friction-Proof Track.** Ball-bearing hanger wheels are machined to provide a line contact with the 3/4" round cold-rolled steel bar runways of the track, assuring minimum friction and silent operation.
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For further information about R-W FoldeR-Way Automatic Folding Partitions, write, phone or wire our nearest office.

See an R-W FoldeR-Way Automatic Partition in operation at any of the Schools in the partial list at right, or write for address of installation nearest you:

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Hinsdale Community High School, Hinsdale, Ill.—Opening: 127' x 20'
Arvin High School, Arvin, California—Opening: 142' x 20'
Kincaid School Gymnasium, Houston, Texas—Opening: 71' x 23'
High School, Brookline, Mass.—2 Openings: 100' x 20' and 120' x 20'
Banks School, Bay City, Michigan—Opening: 80' x 18'
Beloit Senior High School, Beloit, Wis.—Opening: 123' x 27' 6"

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COACHES' CORNER



Please send all contributions to this column to Scholastic Coach, Coaches' Corner Dept., 351 Fourth Ave., New York 10, N. Y.

KING-SIZE Herman Hickman is immortalized as one of football's greatest guards. Actually, however, he played guard only one season at Tennessee. He started as a tackle. The turning point came in the Alabama game in 1930.

Before the game, Herman asked his coach, Major Neyland, for instructions. "Get a yard and a half across the line of scrimmage and make a pile," the Major told him. So Herman began making piles. But Alabama won, inflicting the only defeat suffered by Tennessee in Herman's four years at the school.

After the game, Neyland came over to Hickman and asked what happened. "I did just what you told me," Herman declared. "Got a yard and a half across the line of scrimmage and made a pile."

"I told you to make a pile," Neyland groaned, "but I didn't tell you to be on the bottom all the time." The next week Herman started playing guard.

After college, Hickman joined the Brooklyn Dodgers. The owner of the club, Shipwreck Kelly, also played in the backfield. When the Chicago Bears came to town, Kelly and Hickman drew a tough assignment. They were supposed to take out Bill Hewitt, the Bears' very tough end.

Shipwreck took a good look at the bulky Bear, patted Hickman on the back, and said, "Go get him, son. I'm the owner of the team!"

The latest Yogi Berra tale concerns his visit to the St. Petersburg waterfront to watch a yacht race. One of the boats was flying a Jolly Roger pennant, complete with the pirates' skull and crossbones. "Know what that means?" Yogi was asked.

"Sure," answered Yogi, "Iodine."

While cleaning out an ancient file, we came across a yellowed newspaper

clipping marked, "Good subject for editorial." So, before relegating it to the limbo, we read it through. And quite a juicy little item it turned out to be:

The basketball captain of the University of Illinois, one Lou Boudreau, has been suspended from athletics following the disclosure that his mother was on the payroll of the Cleveland baseball club. That's right, his mother!

It seems she received \$100 monthly checks. It seems also that young Boudreau is a pretty slick third baseman. In return for the monthly checks the Cleveland club had Boudreau's verbal agreement he would join the club after graduation.

After this "heinous" disclosure, Illinois had to give young Boudreau back to the Indians—and they were glad to get him!

Like Babe Ruth and many other famous athletes, Andy Lotshaw, veteran Cub trainer, has trouble remembering names. One of the names that gave him most difficulty was Jack Lelivelt, then manager of the Cubs' Los Angeles farm club. Andy could

never get it straight. He called him Leffinwell, Littlefield, Blauervelt, anything but Jack's right name.

One afternoon the late Pat Malone, at that time a young pitcher with the Cubs, thought he'd have some fun with the trainer. "Oh, Andy," said the pitcher, "what's the name of our manager at Los Angeles? I've forgotten it."

Lotshaw straightened up from his taping chores and stared at his questioner, all innocence, across the room. "You'd better learn it," he grunted, grimly. "That's where you're going to do your pitching this summer."

When Stan Musial broke in with the Cardinals, the club was operated by Branch Rickey, who was never noted for his liberality. Musial, being a newcomer, had to settle for the lowest salary on the lowly Card scale.

One afternoon Stan belted a triple and as he stood on third base, Mike Gonzales, the Card coach, said to him, "Stan, if I heat like you, I play for nothing."

To which Musial tersely replied, "I do."

Back in July, a genial gentleman named Jack Dolph, who signed himself "non-faculty adviser on track, Deerfield (Mass.) Academy," informed us he was preparing a comprehensive monograph on high school cross-country and would like to study and quote the articles that had appeared in *Scholastic Coach*.

The letter got lost in our inter-office mail system and didn't cross our desk until two months later. We promptly sent him a note, giving him *carte blanche* quotation rights and apologizing for the delay.

Mr. Dolph sent us a delightful reply, assuring us that "The delay didn't inconvenience me at all. I was too busy breaking all the rules of all the articles you've ever printed on the subject of cross-country. Your lads say—apparently from one or another sort of ivory tower—that cross-country should be fun!"

"Not in our league it ain't! It's a grim, dedicated business with simply tremendous physical and spiritual re-

SUM OF THE ALL-AMERICAN OFFENSIVE TEAMS

Position	Associated Press	United Press	International News	Collier's Men. Coaches Assn.	Look Mag. Writers Assn.	N.E.A. Press Service	Final Winner
End	McPhee Princeton	Flowers Purdue	Collier Northwestern	Bell Pennsylvania	Flowers Purdue	Flowers Purdue	Flowers
Tackle	Suminski Wisconsin	Miller Georgia Tech.	Achaiger Cal. A.&M.	Meadows Duke	Miller Georgia Tech.	Miller Georgia Tech.	Miller
Guard	Matuszak Tulsa	Willhoite U.S.C.	Willhoite U.S.C.	Willhoite U.S.C.	Willhoite U.S.C.	Willhoite U.S.C.	Willhoite
Center	Brown Georgia Tech.	Mooney U.C.L.A.	Catlin Oklahoma	Mooney U.C.L.A.	Catlin Oklahoma	Catlin Oklahoma	Catlin
Guard	Michels Tennessee	Michels Tennessee	Takacs Ohio State	Sewell Texas	Michels Tennessee	Michels Tennessee	Michels
Tackle	Gilbert Mississippi	Modzelewski Maryland	Fleck Syracuse	Modzelewski Maryland	Gilbert Mississippi	Spencer Kansas	Modzelewski
End	Stohlhandske Texas	McPhee Princeton	Stohlhandske Texas	Martin Georgia Tech.	Stohlhandske Texas	Meilinger Kentucky	Stohlhandske
Back	Scarboth Maryland	Scarboth Maryland	Scarboth Maryland	Scarboth Maryland	Scarboth Maryland	Scarboth Maryland	Scarboth
Back	Giel Minnesota	McAuliffe Michigan St.	Hardeman Georgia Tech.	McAuliffe Michigan St.	Giel Minnesota	Cameron U.C.L.A.	McAuliffe
Back	Heinrich Washington	Lattner Notre Dame	Obzewski California	Lattner Notre Dame	Filipaki Fillanova	Obzewski California	Lattner
Back	Vessels Oklahoma	Vessels Oklahoma	Vessels Oklahoma	McPhail Oklahoma	Vessels Oklahoma	Vessels Oklahoma	Vessels

wards. When we get around to the playground attitude, I'll go back to training running horses. . .

"Thanks enthusiastically for your permission. I've never been able to rattle Scholastic Coach away from the other coaches around the place, so I've never read it too often. Enclosed find dough for a personal subscription."

Quotable quotes. From Bill Veeck, owner of the St. Louis Browns: "We just made one mistake. We started the season like a lion and we finished real well. But our mistake was scheduling those 150 games or so in between."

From Tommy Fitzgerald in the *Louisville Courier-Journal*: "Rogers Hornsby says he's neither a diplomat nor a slave-driver. In managing the Browns and the Reds the same season, though, it looks as if he might qualify as a martyr."

"In one of our recent basketball games," writes B. L. Slavin, of Northwestern Military & Naval Academy, Lake Geneva, Wis., "I had an idea that my players weren't paying too much attention to my instructions. During a time-out, I ordered a change in offensive tactics. But nothing happened. Something told me that the boys' thoughts were elsewhere, and I decided to put my theory to the test."

"In our next huddle, I gave them a pep talk, told them what to do, and then finished with, 'Go out and play good ball because I killed my grandmother last night.' Nobody batted an eyelash or said a word as they broke out of the huddle. That was all, brother. I then knew that some rapid substitutions were in order."

Four years ago an item appeared in this department extolling the virtues of a freshman quarterbacking wonder at Elk City (Okla.) H. S. Well, the kid has put in his four years and we have a complete dossier on him. Name: Phil Harris, age 17, height 5-10½, weight 176.

An incredible all-around performer who passed, ran, kicked, converted extra points, and played defense, the kid completed 229 of 369 passes for a whopping .620 average. He hit for 34 touchdown passes, tallied 47 touchdowns by rushing, and boosted 68 out of 101 extra points.

His 1952 statistics border on the unbelievable. He completed 56 out of 91 passes for an average of .626, hitting for 9 tds. and having 3 others called back. He also chalked up 14 tds. on runs of the following yardage: 12, 18, 38, 23, 20, 28, 73, 23, 90, 51, 26, 42, 81, and 28. He converted 26 out of 39 tries after td. and averaged 35.4 yards per punt and 9.14 yards per carry (103 tries for 942 yards).

Note to college scouts: Before taking the nearest plane for Elk City, you might as well know he's already picked out a school. It's Oklahoma A. & M., where he'll study chemical engineering.

We hope the boy's father won't think

• BASKETBALL NATURALS. •



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we're a rat for revealing his (father's) identity. Papa is none other than Verne D. Harris—Phil's coach at Elk City!

Another pretty awe-inspiring Father-Son football combination is the Loucks combine of powerful White Plains (N. Y.) H. S. Dad Glen coaches the team while son Dean quarterback's it. And what a team it is—having gone 29 games without defeat. The 1952 eleven was one of the greatest school-boy clubs we've ever seen, rolling up 355 points in 8 games (to the opponents' 32).

The total could just as easily have been 500 or more points. Coach Loucks frequently had to open the gates of mercy after a period and a half. It's doubtful whether his first team averaged more than 24 minutes playing time per game! Star ball-carrier was Harry Jefferson with 17 tds., while Dean Loucks did a beautifully professional job of running the T and passing.

Speaking of superlative schoolboy performances, we must put in a word about Sonny (Buck) Stringer, of Willow Springs (Mo.) H. S. In running his school's undefeated streak to 39 against Springfield H. S., Buck completed 16 of 18 passes for 353 yards and carried 17 times for 158 yards—to account for 511 of his team's total 535 yards!

In our rush to get our All-American high school track team into print (in September), we neglected to include our usual summary of the outstanding champion-producing states. As usual, California led the way—producing 16 All-Americans. New Jersey followed with 7, trailed by Oklahoma, Arizona, and New York with 4 each. Last year, it was much the same story. California led with 17, trailed by Illinois, Pennsylvania, Oregon, and New Jersey with 4 each.

"Our Commercial Club recently threw a banquet for the high school football team," writes Willard E. Solberg, superintendent of the Bowman (N.D.) Public Schools. "Since the team had won only one game during the season, Coach Eric Strobel wondered what he'd say in the little speech he'd be called upon to make. During the meal, he asked one of his players (C. Maynard Solberg) to write a poem for him. The following was the result. It was read by the coach and was very well received.

*We started the season
Like a house afire,
But after the first game,
We began to tire.*

*The Bulldogs were willing
To work for me—
But they couldn't pull out
More than one victory.*

*I could not sleep,
I rolled and tossed,
But even in
My dreams we lost.*

I didn't coach
A titleholder;
You'll just have to call me
A character molder.

Italy made 13 errors against Spain in Europe's first international baseball game. It looks as if Italy's next loan from the U.S. ought to include a request for Phil Rizzuto, as well as cash. (Tommy Fitzgerald in the Louisville Courier-Journal.)

Playground Facilities

(Continued from page 16)

Somewhat similar safety precautions will apply to the use of horizontal ladders, flying rings, giant strides, and other apparatus. These safety rules should be posted conspicuously in the immediate vicinity of the equipment. Vigilant supervision on the part of playground leaders will encourage proper and safe use.

All wood parts of the apparatus should be refinished regularly. Even though the apparatus is subjected to exceptionally hard use and is constantly exposed to rain, snow, sleet, wind, hail, and dust, its original factory painting is seldom refurbished.

Years of extra service can be added by painting the equipment regularly. Also remember that the protective paint coating will last longer and look better if the wood parts are sanded reasonably smooth before they're refinished.

Where properly galvanized by the hot-dip process, the metal parts of the equipment will stand up beautifully for at least eight years. In fact, the pipe members, chains, and malleable fittings will tend to weather-out smooth and shiny as the years pass.

You'll require protective finishing only when signs of rust appear. When that occurs, you need simply clean the metal parts with steel wool or emery paper, then apply two coats of any good grade of outdoor enamel or, if bright colors aren't deemed necessary, with any standard asphalt-base bridge paint.

Promoting playground safety, after all, is a community education program. It must be dinned into the ears of the youngsters day in and day out until they become so safety-conscious that they'll do the right thing automatically. And their elders can make play still more safer by using their heads and money wisely in purchasing and maintaining extra-safe facilities.



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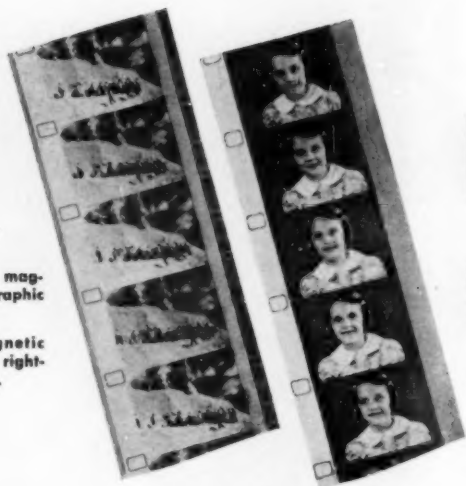
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Left: Combination magnetic and photographic sound track.

Right: All magnetic sound track (on right-hand side of film).

NEW

Sound on Film

SOUND movies have come a long way since *The Jazz Singer* burst upon the public. For a time, they were produced only professionally on the large-sized (35-mm.) film. But with the perfection of sound-recording techniques, it soon became possible to work with 16-mm. film.

Most so-called 16-mm. sound films are ersatz productions. The action is shot as a silent film, then the sound is dubbed in by a professional processor. Since it's very expensive to make a genuine sound movie, most school-produced pictures are silent affairs.

Of course, excellent sound films are available from outside organizations. All these are categorized as "optical" sound films. The sound track is photographed on the film and cannot be changed. The pictures played in movie houses are examples of optical sound films.

The latest development in the audio-visual field—of profound significance to schoolmen—is magnetic sound on film. This process is an outgrowth of tape recording. If you're familiar with tape recording, you know that the sound is recorded on a tape coated with red ferrous oxide.

As the tape unwinds, the sound or music is absorbed. The tape then plays it back through an amplifier and loud speaker. Recordings can be left permanently on the tape or can be "erased" and a new recording made. The tape can be used over and over again in this fashion.

Now, thanks to the aforementioned development, the same process can be applied to 16-mm. silent motion picture film. *By adding a magnetic sound stripe to your 16-mm. film, you can convert all your thousands*

of feet of silent film into sound film for instructional or other purposes!

As you know, your silent film possesses double sprockets; that is, it has holes on both sides which pull the film through the projector. In the new process, a duplicate of the film is made but with sprocket holes on just one side. Then a thin magnetic film stripe is applied to the other side. This is for your sound.

To apply the sound, your school must buy a magnetic sound projector. This is a good investment, since it projects silent films, optical sound films, and the converted silent or optical sound films.

The projector is used both for recording and projecting the magnetic sound. The film is run through the projector. As it unwinds and appears on the screen, you record through a microphone (which is part of the apparatus). Mistakes can easily be erased, and music may be recorded at the same time.

The recording may be left permanently on the film or may be completely erased and a new recording made. This may be repeated as many times as desired. This, in addition to low cost, represents one of the greatest advantages of magnetic sound on film.

Now let's suppose you have some sound films you'd like to convert. You'd like to retain the sound but add your own commentary, stressing points not covered by the original commentator.

This can be done by applying the thin magnetic sound stripe alongside the original or optical sound track. You can now record your own sound track and still use the original sound track whenever desired.

All right, you're sold. You're in-

terested in using this new process in future films of your football and basketball games, practices, or special instructional demonstrations.

If your school has a 16-mm. motion picture camera, you may take the film the same as ever. Remember, however, that your present camera only uses double-perforated film—that is, with sprocket holes on both sides.

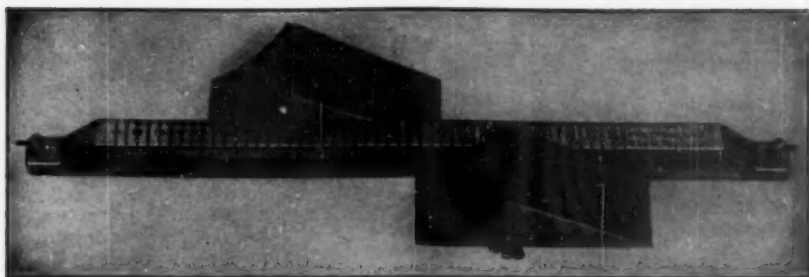
Therefore, after processing the film and editing it, you must have a duplicate made. Send the duplicate to the processor and he'll then apply the magnetic film stripe. When the film is returned to you, you'll be able to record on it—using your magnetic sound projector.

If you have the wherewithal, you may purchase a 16-mm. camera which accommodates both single and double sprocketed film. That means once the picture is taken and developed, it can be sent direct to the magnetic-sound processors. No duplicate is necessary.

If you're interested in this new development, we suggest that you check your school for a tape recorder. By having the tape recorder demonstrated to you, you'll easily see the advantages of magnetic recording.

If your school doesn't own a tape recorder, you'll probably be able to locate one in town. It's a popular item and is carried by many stores. Ask for a demonstration. Record your voice. Have it played back to you. Have your voice erased. You'll see how simple the process is.

For complete information on the process and the equipment, write to *Scholastic Coach*, New Equipment Dept., 351 Fourth Ave., New York 10, N. Y.



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"The Choice of the 1952 Olympic Champions"

- Better starts, better performances, less delay. Saves time in running off meets and heats.
- Adjustable to all types of starters, right or left footed, tall or short, in 3 to 9 seconds. Calibrated for remembered individual adjustment.
- So well built for standardization and costs so little, now being used by hundreds of schools one for each lane. "Truly the Champions Block."
- Runners using Arnett Blocks hold many World records and broke several Olympic marks in 1952.
- Buy and furnish one Arnett Block for each lane on your track and quit carrying blocks from school to school, town to town, or nation to nation.
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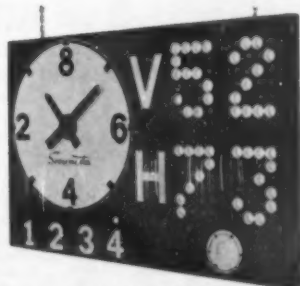
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For **VISIBILITY** and **PERFORMANCE**,
in a class by themselves.



Model 253-4

Buy professional gloves; they'll last longer and give better service.

Don't forget to order a scorebook and bases.

Bases: Duck cover $\frac{1}{2}$ " jute lining and jute stuffing. Quilted top saves spikes from tearing bag apart easily. Two straps are better than one.

Don't buy cheap shoes. Get soft leather and flexible shanks.

Use Sav-a-Leg-model home plates to prevent broken legs in sliding.

Bats: Northern ash close-grained models have proved superior.

Select modern body protectors with adjustable harness and kapok stuffing. (Reversible with reinforced leather-bound edges, most practical.)

Your Baseball Equipment

(Continued from page 32)

Masks: Lightweight with clear vision and protection for ears. Prefer two-bar magnesium type, because it's light, easy to handle, and affords full vision.

Catcher's cups: Buy metal cups for your receivers, particularly if they use the new type of protector.

Leg guards: Corrugated fibre, well-padded with elastic leg strap that snaps on. Corrugated instep with sponge rubber padding. Rubber cushion under felt at knee caps furnishes added protection.

Perhaps a special word is in order about baseballs—which are an expensive item today. I find that it pays to buy the best grade major league ball. They last three times as long as the cheaper type. Cheap balls, after one game, cannot be used satisfactorily even for practice.

Many high school coaches are using the rubber-covered baseball for early season practices and for days when the grass is wet. They cost about half the price of the regular ball and stand up better under rough conditions.

Personally I don't like to use them once we start playing our league games. But they do help keep the budget down where you use about eight dozen balls during the season.

Insofar as losing balls is concerned, this can be reduced to a minimum by stopping practice as soon as one is missing.

Following are some recommendations on the care of the equipment:

Dry-clean the uniforms at reliable cleaners only. Otherwise the uniforms may shrink and the colors may run. Clean often, as deep stains ruin them. Repair small tears at once.

Warn your players not to put them (uniforms) into the family laundry. Explain that certain soaps and detergents have to be used.

Suspend the uniforms properly on rust-proof hangers. Shake out before hanging.


Oil the gloves inside and out. Leather preservatives are fine. Whenever they get wet, they should immediately be dried. Many big leaguers use vaseline in conditioning their gloves, rubbing it in with their fingers.

Use antiseptic powder on leather when storing away. Remember that moisture, high temperature, or even dirt can be harmful to leather. Store your equipment in a dry, cool place. This applies to bats, balls and bases, as well as leather items.


Apply a leather preservative to the leather in the catcher's mask, then apply a light film of vaseline to the metal parts before storing in a dry, cool place. This also holds true for protectors and shin guards.

Before storing your bases, cover the spikes with grease and cover the bases with paper or cloth to keep out the dust.

Dirty bats may be wiped off with a slightly oily cloth.



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...in LOW PRICE

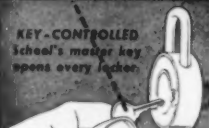


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KEY-CONTROLLED
School's master key opens every locker.



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so convenient for school staff




Thousands of combinations, with 3-number dialing, protect the student — yet only one school-owned master key will open every locker!

"sure operates easily"
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Here's the latest in padlock protection—tops in convenience and quality, yet in the bargain-price-bracket. It will pay you to consider Master.

Board members say:
"The price is easy on our budget."



Write today, to Dept. 4



MASTER NO. 1500
Long time school favorite. Constructed like No. 1525, but without key control. Master is also world-famous for laminated padlocks.

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Roosevelt High, Honolulu
— and hundreds of others!

Master Lock Company, Milwaukee, Wis. • World's Leading Padlock Manufacturers

LINE MARKING DEVICES

By LES HARMAN

Community H.S., North Chicago, Ill.

WHILE working at Barrington (Ill.) H.S., I discovered that a school custodian, given the opportunity, can develop some good ideas in the way of ground maintenance.

Barrington was blessed with just such a gentleman in Roland Street. He loved to work outdoors and was always looking for means of facilitating the little time-consuming maintenance chores. He came up with two ideas that were exceptionally good, and which deserve to be passed on to other school men.

First is an extremely valuable line marking short-cut. As you know, heavy dew and rains in the fall and spring often make it necessary to line the fields practically every day. This is quite an order, but not where Mr. Street is concerned.

He lines all the auxiliary and physical education fields once in the fall and has it last all year! He takes the line marker, fills it with a strong solution of weed killer, and sets the machine for the finest line possible.

He then marks all the fields. The weed killer turns the grass (where marked) very brown and the markings show up sharply and last all fall!

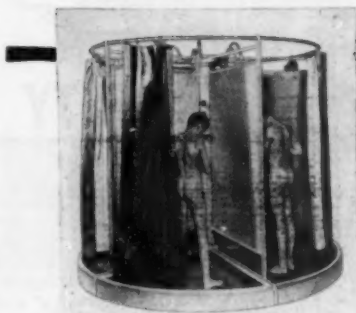
FOR MAIN FIELD

This may also be done on the main field, with the markings gone over for every game. Or the main field may be marked in the following manner:

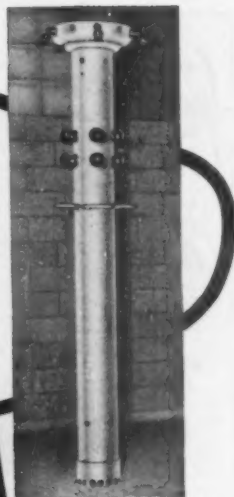
Drive short pieces of half-inch pipe into the ground at all corners and at every 5-yard line. Drive them in flush with the ground so that they don't endanger anybody.

Now attach spikes to each end of a long piece of cord, and place the spikes into the pipe holes wherever desired. Pull the cord tight and then proceed to run your machine down the line.

You'll get the same straight lines over precisely the same spots every game year after year. This saves a lot of time hunting around, measuring every year, and driving stakes. (Special ground plugs, commercially manufactured, are particularly valuable in this respect.)



3- and 5-Stall Shower Units are delivered partially assembled.



This is same shower with-out stall partitions.

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Bradley Showers well meet all the requirements for quick, healthful, convenient showering. They are made in 3-stall and 5-stall units which are shipped partially assembled for fast installation, and they reduce piping and piping connections one-third to one-fifth because one hot water, one cold water and one drain serve 3 to 5 stalls.

Arrangement suggestions are included in new 12-Page Booklet, "Washroom Layouts." Copy free on request. BRADLEY WASHFOUNTAIN CO., 2361 W. Michigan Street, Milwaukee 1, Wisconsin.

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1000 Bath-Towels: 18" x 40" in a carton

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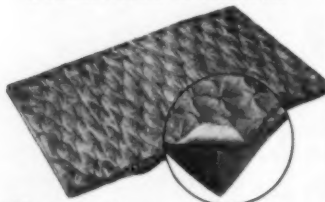


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A Plastic Treated 18 oz. Canvas



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SAFETY IN DIVING

By **HOWARD CURTIS**

Oberlin College

DIVING requires top physical condition, patience, nerve, and proper guidance. It can provide a great deal of enjoyment either as a recreational pastime or a competitive sport. But both instructor and student must accept the fact that a certain amount of fear and danger are inherent in the activity, and that certain safety factors must be observed.

Perhaps of foremost importance is protection for the head. Upon every head-first entry into the water, the diver's arms should be extended vertically "above" the head and locked at the elbows, with biceps muscles pressed against the ears.

The thumb and forefinger of one hand may clasp the thumb of the other hand. This latter measure will insure that the hands are close together in opening a hole in the water for the head. If the arms aren't directly in line with the head a possible neck sprain may result, the eyes may be injured, and the skull may receive a mild blow on impact.

In competition, a head that's out of line with the arms on entry will cause a head splash as well as an arm splash, and may prevent the body from continuing in true form to the bottom of the pool. A cast to one side or the other may result, and the legs may throw water directly in front or in back.

These things may occur when the head is out of line for the entry, even though the body may drop perfectly straight.

It's of vital importance to hold the locked and extended arms in position until the dive is completed with palms flattened on the bottom. Where the arms are relaxed or not held in place, especially in a pool of less depth than the diver is accustomed to, a concussion, skull fracture, or tooth fracture may result.

Every diver must become thoroughly familiar with the depth of the pool before attempting to dive. The more experienced diver, when working out in a pool of less depth than he's used to (12 feet is a safe depth for three-meter diving and 10 feet for one-meter diving), may judge when his body is completely submerged and scoop it forward by raising his head and hands to lessen the force of impact. This is difficult, inasmuch as a dive scooped too soon will ruin the entry.

The eyes should be kept open during all dives. Though many prefer to learn them "blind," only opening the eyes on the more difficult dives to ready for the entry, keeping the eyes open enables the performer to know where he is in the air.

A dive that's short on entry may be "saved" by pressing the head hard to bring the legs to a more vertical position. The way in which the head is pressed (forward or backward) to save a dive that's not quite completed depends upon the dive.

A dive that's "long"—where the dive is carried beyond completion—is more difficult to save because motion started in one direction is more easily continued than checked and reversed, and gravity is often working against you here.

In executing a plain front dive, for example, the diver may find that his legs have come up too fast and he's beyond the vertical and dropping "long." A very serious back strain may result, if he continues to pull the head up in an effort to save as he contacts the water. The legs driving over beyond the vertical, and the head pulling back, when suddenly forced back more by impact with the water, stretch the muscles in the lower back.

To prevent injury in this situation, the diver should tuck the head forward just as contact is made so that a somersault is done under water.

A novice need take only one practice bounce with each practice approach. Continuous bouncing may be dangerous where control is lost, and isn't necessary.

To avoid serious accidents, a diver should look carefully for swimmers in the area or about to push toward the diving area from the side or end of the pool.

A low ceiling is another factor to be considered. It often presents a terrific mental hazard. Extra precautions should be taken before executing backward or cutaway dives, because they are "blind."

A movable fulcrum is of prime importance to those who take diving seriously. It enables each individual to adjust the lever arm of the board

to obtain maximum lift for his weight.

In general, the farther the fulcrum is from the take-off end of the board, the more spring may be obtained. A lighter person will get more lift than a person 10 pounds heavier by rolling back the fulcrum from where the former had it adjusted.

It must be remembered that the farther back the fulcrum, the slower the board spring. Each individual must find the spot where the board best suits him. A board that's too slow is as inefficient as one that's too stiff.

The best standard springboard for instruction is 16 feet long and mounted one meter above the water. All dives should be learned from the one-meter board before they're taken to the high board.

A board should have a special non-slip surface or a coarse matting covering the entire upper surface. Matting should extend over, around, and under the take-off end so that it may be fastened underneath. The matting should also be well tacked down so that it won't stretch and cause a diver to slip on his take-off. Sharp corners on the take-off end of the board should be smoothed out.

When a mat becomes heavily soaked with water, the board becomes slippery and it should be allowed to dry out. The best arrangement is to mount a board so that it may be raised and fastened against a wall until ready for use. When the board is recessed, more space becomes available and racing starts are facilitated—they're often hindered by a diving board projecting out over the pool.

A further factor to be considered is that of physical condition. A diver who's weak or tired from illness or a prolonged workout, would do better to discontinue diving until he returns to normal.

If he's the only person using the board during a workout, a minute's rest between dives will insure a longer, more profitable workout.

AUTHOR Howard Curtis will be remembered for his fine two-part diving series in the February and March 1952 issues ("Approach to Diving" and "The Basic Dives"). Currently the assistant director of admissions at his alma mater, Oberlin College, he was runner-up for the Ohio Conference diving crown for three straight years and also taught the sport in the Ohio State U. physical education service program

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Shows how patented steel horse fits into and firmly grips steel stringer.



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Hussey Stands are available in two styles—Portable Bleachers (Model 6), Portable Grandstands (Model 8). 6, 10 and 15 tier 12 foot sections in stock. (Additional sections can be added as needed.) Other sizes to order. These stands can be used indoors and out and can be erected and taken down easier and faster than any other stands on the market.

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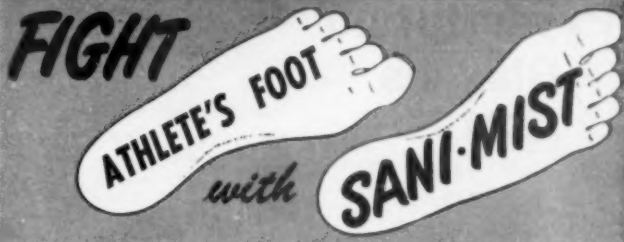
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Schools are finding SANI-MIST the most effective way to fight "Athlete's Foot". It was developed expressly for use in SANI-MISTER Spray Dispensers to provide low-cost protection in the shower room.

Statistics show 3 out of 4 persons will fall prey to this infectious disease this year, unless preventive steps are taken. Use SANI-MIST and prevent the spread of "Athlete's Foot" inside and outside your school.

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1. Step On
 2. Mark Time
 3. Step Off
- THAT'S ALL!

is cheaper than time-honored cinders. Granite or some other equally suitable igneous rock is easily obtained in most regions of the nation.

In the building of the San Diego track, for example, cinders transported from the nearest source, only 130 miles distant, would have cost about \$10 per ton as compared to the \$3 per ton paid for the local decomposed granite. (Two-thirds of the total cost of \$112,000 went toward the extensive excavations required to prepare the site.)

The durable rock doesn't wear or powder and never requires the supplementary additions that must be made yearly to preserve a cinder track's "life." Repeated rakings and draggings sift out larger particles and the crushed-rock surface becomes finely uniform after a few months, producing even and sure footing for spiked shoes.

Cinders are often mixed with such materials as tanbark or coal-ashes to produce a cushioning and binding effect. Since these products are also difficult to obtain in many vicinities, the simple clay binding necessary in a crushed-rock track is often less expensive and easier to procure.

San Diego State's Track

(Continued from page 11)

Actually, the San Diego track's remarkable drainage is due entirely to the intrinsic qualities of its decomposed granite dressing and all-rock base layers. It has no underground drainage system, containing tile drain lines and such, as are often found in other parts of the nation where heavy rains are the expected rule and not the awesome exception.

The track was constructed in the customary three layers with the following materials: A five-inch bottom layer of coarse crushed stone, leveled and heavily rolled; a three-inch middle layer of finely crushed limestone, screened $\frac{3}{4}$ to one inch, well rolled; and a four-inch top dressing of decomposed granite mixed in four-to-one proportions with a clay binder and screened to $\frac{1}{4}$ inch.

The pole and outside curbs are merely slightly raised two-inch wide redwood headers. Starting and fin-

ishing lines, along with relay offsets and marks for hurdles, are painted on the curbs or more permanently marked with brass cleats.

Ample serviced by sufficient water lines and hose connections, the field also contains six catch basins which feed into a 12-inch concrete drain line.

More striking than these material features is the track's distinctive layout, based largely on ideas that Sportsman developed in the construction of the fine track at the Navy's Pre-Flight School at the University of Georgia during the war.

The quarter-mile oval is braced by two 35-foot wide 250-yard straightaway, making it one of the few tracks in the nation with two full furlong stretches. This makes it possible to run off sprint and hurdle qualifying heats at the same time, if necessary. It also eliminates the delay entailed in placing and removing hurdles.

The track is 30 feet wide at its slightly banked curves, and two straightaways allow for the running of one-turn 440's and three-turn 880's in either direction.

Probably the infield's most conspicuous features are the two circular high jump approaches located within the curves.

Realizing that our modern high jumpers approach the cross-bar from many different angles, Sportsman envisioned a layout which would assure all competitors of equally firm footing, sufficient distance to run, no grass to come off of, or curbs to skip.

Each high jump circle is 94 feet in diameter and surfaced the same as the running track. The regulation size sawdust-filled pits in the center make it possible to jump from four directions, thus eliminating the annoyance of jumping into a strong wind.

The grass-covered infield is bordered by four granite-surfaced 120-foot dual-purpose pole-vault and broad-jump runways. There are two on each side, with the pole-vault pits in the middle and broad-jump pits on each end.

These also eliminate the wind problem and will speed up high school meets where competition in different classes is going on at the same time.

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Sportsman now believes that these runways are perhaps a bit too short and plans to have two of them lengthened to 150 feet.

Each of the four broad-jump pits is 30 feet long, so that there's no falling out onto hard dirt or grass at the end of a jump, which often produces painful abrasions or serious injuries. They are filled with fine sand leveled flush with the take-off boards and runways.

All runways are three feet wide with two-inch redwood curbs down the sides and around the pits.

The plan also includes dual javelin runways and double shot-put and discus circles, all of regulation size and situated on the infield. In this manner, competition in all the weight events is placed in full view of the stands.

A 80 x 40 all sheet-metal equipment storage building is conveniently located within the track grounds, and the entire area is surrounded by a nine-foot steel wire-mesh fence.

SEATING PROBLEM

The layout's only serious fault is a lack of spectator seating and adjacent dressing and showering facilities. Stands with an approximate seating capacity of 2000 are to be built within the next two years. Meanwhile the seating problem has been temporarily alleviated by the loan of take-down bleachers seating 1000 from the U.S. Navy.

The dressing and showering loads are currently being carried by the gym and the previous track's field-house.

Sportsman still has another plan left to make his dream complete—and that is night lighting.

In addition to the college trackmen, teams from nearby service installations make almost daily use of the San Diego track for work-outs and meets. Such constant heavy traffic makes proper maintenance of prime importance.

An attempt is made to fill in all holes and smooth out spike marks with daily brushings. Before each meet, the track is dragged with a leveling float and sometimes rolled. During hot, dry weather, the track and runways are usually wet down after work-outs.

With the All-Service championships slated for June 7-8 and with the possibility that the track may be the site of the 1953 NAIB championships, San Diego State's unique "weather-proof" track seems destined to become one of the best known in the nation.

It's a tribute to a Sportsman!



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WEBSTER CITY
IOWA

A High School Fieldhouse

(Continued from page 9)

covered with a cement enamel finish. This finish is similar to tile but lacks the mortar points so that it cannot loosen or chip, yet can be washed or scrubbed with minimum effort.

Our equipment inventory is handled in a rather unusual fashion. Like most other schools, we number every item. But we use a rubber stamp (rather than stencil) with a regular laundry ink.

We keep inventory in a snap-ring ledger book containing enough pages to enable us to record only two or three items per sheet. We can thus keep the complete history of each piece of equipment. Each item is given a number and filed numerically.

The book also contains an equipment card for every boy, filed alphabetically. Each card is sufficient for four years use. As you can see, this affords us a cross-index of both the equipment and the users.

When a boy asks for the number of a particular item, we turn to his card. When a particular number is the clue, we turn to the page containing that number and immediately discern to whom it was issued.

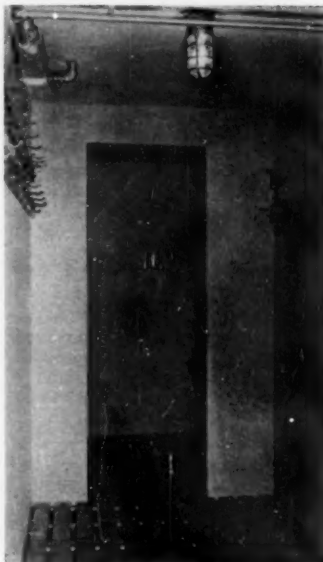
During the first fall football season, we accomplished two things: (1) Thanks to our ventilation and racks, no boy ever had to put on a wet or damp piece of equipment before practice; (2) all boys had clean equipment to wear from the skin out three days a week, plus a clean towel every night.

Every boy pays a \$2 equipment rental fee. For this fee, we furnish everything—T shirts, supporters, two pairs of socks per night, and all heavy equipment. To get clean replacements, the boys must hand in the dirty items.

If they haven't any to hand in, they are charged for them. A pair of socks or a supporter costs them 20¢ and a T shirt 40¢. This plus the \$2 goes into our laundry and replacement fund.

At the season's close, we check all the turned-in equipment on the racks. Our cross-index affords a double check on each piece. If a boy loses an item or doesn't turn it in, he pays the replacement charge on it.

To date, we've not had to collect for any item. So far we've lost only one track shirt—and that by a coach!



Towel and drying room, showing entrance leading to 8-head shower room. Note push-button control, soap tray, and shower head in ceiling above. Two large exhaust fans draw out moisture so that it can't permeate dressing or towel room.

We also levy a 10¢ fine on any boy who fails to properly hang up clothes and equipment. Since we've only collected 40¢ during the past two years, it's obvious that we're not annoyed by any items on the floor.

After checking everything, we sort, inspect, and launder all the equipment. Parents are prevailed upon for minor patchwork, sewing on of buttons, etc. In time of need, the athletic director can also "sew a fine seam." Every item is then stored by the field house manager (athletic director).

Student managers are employed for this work throughout the season. The weekly janitorial work is also done by managers working for a letter. The entire building is mopped, dusted, and cleaned by a boy every Saturday morning during the season. He's paid for this service.

These facilities are the culmination of 36 years of dreaming and planning, and have been realized through the efforts and cooperation of school administrators, school board, townspeople, and students.

What was formerly garden, orchard, and vineyard have been converted into athletic facilities by private land and money donations, school purchases, student subscriptions and donations, and city council purchases.

The entire field house, started with a contribution of \$8,000 by Mr. and Mrs. Harry F. Arkins, cost us \$68,000. Without the intensive creative and manual efforts of the various school departments, it would have cost us thousands of dollars extra.

A Gym Dandy

(Continued from page 12)

24" (see photo). This combination furnishes a maximum of 60 lockers for street clothing during physical education classes plus 540 smaller lockers for gym uniforms.

Toilet facilities and a towel storage room adjoin the locker room, and next to the locker area are two shower rooms (12' x 13') with adjoining drying rooms, each 11' x 12'. Each shower room features eight shower heads individually attached to the walls.

A visiting team locker room with adjoining toilet completes the shower-locker room suite. A separating door between the two shower-drying rooms assures the visiting squad of all the privacy it desires. During the regular class periods, both shower rooms are available for rapid showering.

The corrective exercise room is 24' x 26' and contains stallbars, barbells, chest exercise pulleys, parallel bars, horse, and buck. In fact, all the gym equipment is easily accessible to both the regular gym and remedial programs.

Included as part of the addition housing the new physical education plant are new stage facilities which permitted an enlargement of the auditorium. A complete remodeling job furnished extremely satisfactory acoustics, new theater-type seats, and complete revision of the lighting system. The auditorium now presents excellent facilities both for school and community use.

Immediately below the gym, at the first floor level in the new addition, are to be found adequate facilities for special education, including two industrial art shops, a shop and adjoining classroom for vocational agriculture, a drafting room, and a vocational machine shop.

3

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U.S.C.'s Track

(Continued from page 10)

trough is a complete circle and is connected with six infield drains by eight-inch pipelines. The drains are in turn connected with the main storm drain by a 16-inch line.

A three-inch slope causes water to flow across the track's seven lanes to the curb and pass through outlets in it. Then it flows over a two-lane inner warmup track to the six drains. Most of the rain drains across the track, rather than down.

Unfortunately, several curb outlets are above the level of the track and some water collects on the pole lane. Light rains rapidly seep down and into the trough, but heavier rains, as a three-inch storm in March, tend to lie on the surface of the first lane approximately 12 hours.

Though part of the surface of this pole lane is too loose to provide swift footing after these heavy downpours, the other six lanes remain in outstanding condition. A rolling restores the pole lane to solid condition.

Actually, the entire 440-yard track isn't a seven-lane affair. While the north straightaway possesses seven lanes extending for 180 yards, the south straightaway contains nine lanes running 200 yards. The two curves, of course, are of seven lanes.

SPECIAL WARMUP UNIT

Another feature of the layout is a two-lane warmup track which runs along the inside of the regulation track. It allows a group of athletes to warm up without interfering with teammates who may be competing on the regular track. This warmup track is of the same structure as the larger course, except that it doesn't have the Palco-wool base.

Drainage is also aided by the fact the entire track and infield is up to three feet above the encircling sidewalks. This hastens drainage and prevents the track from becoming saturated.

A certain amount of saturation, however, is an asset. Because the Palco wool hasn't been sufficiently packed down, the track is considered too springy. This spring can be observed when a heavy shot putter or discus thrower bounces on the track. If you look closely, you can detect the surface give.

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ALL STEEL FRAME
Adjustable Rubber Suspension

Equipped with
CANVAS or WEB BED

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Space saving uniform hangers.



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ACCLAIMED AT THE N.C.A.A. AT SAN FRANCISCO



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★ Easy to fill and operate.

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In every state for wholesale and retail distribution of the Adams line of Basketball Score and Basketball Score and Scout Books. Liberal commission allowed. Each book provides a simple, roomy, accurate, economical system for scoring games. Books sell when shown.

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1952 EDITIONS

Order sample copies of above prices and ask for details of sales contract
JIM McQUAID DISTRIBUTING CO.
VINCENNES, INDIANA

Water tends to remove the spring from the wool.

Coach Jesse Mortensen figures the track should take about a year to settle, but hopes to accelerate the process through rolling the track with a three-quarter-ton roller. Because of the wool base, however, he believes the track will always tend to have some spring to it.

"The springy composition of the new track should eliminate the rash of shin splints that harassed the squad last year," he says. "The bounce in the track should make practice easier on the men's feet."

SUPERIOR TRAINING

As a result, the new cinder path should afford much better conditioning than the Los Angeles Coliseum's granite-like track, which has served as the SC practice field for the past three seasons. The old Bovard track at SC was torn up in 1948 to make way for a new baseball field.

The former practice tracks were totally inactivated by heavy rains in the past. Workouts then had to be confined to the gym or to the lawns of an adjacent park.

The new track encircles a football field, on which the field-event areas are located. Discus throwers perform in the northwest corner of the field and toss the platter toward the southeast end, where the javelin men perform. Naturally, the two events are not practiced at the same time.

Along the north sidelines are the pole vault and broad jump pits. Broad jumpers land in a sand-pit and vaulters in sawdust. The latter pit is fenced in by a three-foot wall of sacks stuffed with sawdust. The high jumpers also bounce into a sawdust pit. The high jump and shot put areas are located at the east boundary of the field.

"Yes, this should be the best track for practice in the country," Mortensen claims. "Of course, you'd want a harder surface, like the Coliseum track, for meets where speed's the important thing. But for everyday practice, a springy track like this is tops."

To assure good track and field facilities, you must start with good ground drainage and a good foundation. But even that isn't enough. You must also have daily maintenance to keep the track and runways in excellent condition. Daily brushing to smooth out spike marks is essential, and a weekly "floating" is also recommended. A good maintenance man is worth his weight in diamond crossbars.

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Made of strip steel, built to last indefinitely . . . sanitary method of hanging and drying uniforms . . . give your football players a break—permit them to wear dry uniforms daily . . . thousands in use . . . a real equipment saver.

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Simple and accurate method of remarking fields . . . for football—where yard lines intersect side lines, drill holes to exact depth with special ground auger, then drive in plugs . . . will stay put all year . . . makes remarking always accurate.

• "LAMARWAY" TRACK or SWIMMING SCORE BOOK

The book all coaches are talking about. Brutus Hamilton, 1952 Olympic Coach says: "The Lamarway Track Score Book is a most satisfactory scoring device. It incorporates everything that's essential for accurate and quick scoring. This is a distinct step forward in the field of athletic publications." \$2 postpaid.

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The Aluminum Spill-Proof Hurdle

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• **Save Dollars**—Savings in maintenance required by old style hurdles will soon pay off this attractive ruggedly constructed aluminum alloy hurdle. Sold direct at a price that means real savings in your budget.

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and after events cuts the man power needed in half. The hurdle's simple design allows for stacking and storing in a minimum space.

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• **Save the Hurdler**—There is no split. When struck with required eight pound force the hurdle swings down rapidly. The hurdler's form is not broken.

Now used by hundreds of schools throughout the nation.

Price \$18.95, F.O.B. Wynewood, Pa.

Aluminum Athletic Equipment Company
1531 BROOKHAVEN ROAD WYNEWOOD, PA.

A SURVEY OF HIGH SCHOOL TRAINING ROOMS

By JAMES J. McLAUGHLIN

Mt. Joseph Academy, Rutland, Vt.

ONE of the more heartening aspects of the struggle for maximum safety in high school sports is the steady increase in both training rooms and training equipment.

The following facts and figures were gleaned from a survey of training room practices made by the writer in 1951 while at Purdue University.

The original plan was to survey at least five schools in every state, and questionnaires were distributed accordingly. Only 100 schools responded with full information. Nevertheless, the returns provide a fair indication of the trends in training rooms. All in all, the report covers 30,968 boys participating in 10 sports.

Sixty-two percent of the schools stated that they had training rooms containing basic items such as tape, gauze, antiseptics, etc. Insofar as the larger, more expensive training items were concerned, the schools reported as follows:

Equipment	% Having
Surgical cabinets	69.0
Massage tables	87.2
Whirlpool baths	31.8
Ultra-violet lamps	66.0
Deep therapy lamps	27.5
Therapeutic lamps	39.0
Electric pads	35.6
Army type stretcher	83.0

Training Room Personnel:

36% reported that they had trainers. Of this number, 18% were on a full-time basis.

Care and Protection Available:

61% reported that they keep accurate records of injuries.

51.1% reported that the training room is available to all students, not just the athletes.

50.8% of the schools tape for practices and games.

64.7% of this taping is done by the coaches.

Doctors are present at 84.7% of the games.

44.7% reported that the injured could be cared for immediately.

40.7% of the coaches and trainers reported using the figure-8 type of ankle wrap.

30.2% use the roller type bandage.

Incidence and Area of Injuries:

The most common injuries were to the ankles (53.7%); wrist, hand and fingers (40%); and knees (37.2%).

The three rarest injuries were pelvic region (87.2%), back (56.6%), and chest and ribs (49.4%).

Financial Outlay for Training Room Supplies:

A total of \$27,050 was spent for the 30,968 athletes covered by this survey.

20% of the schools spend less than \$100 per year.

29% spend \$200 per year.

29% spend \$300 per year.

11% spend \$500 per year.

11% spend over \$500 per year.

The average spent per boy comes to approximately 87¢.

Insurance for Athletes:

80% of the schools reported that they have insurance for their athletes.

6.81% reported that their boys pay for this insurance.

43.1% of the insurance is state-sponsored.

19.3% is paid for by the schools.

30.7% of the insurance is of a "special type."

This is a solid answer to alarmists who claim that our school administrators aren't looking out for the safety of their charges.

Locker Room Aids

(Continued from page 20)

for physical education. From long experience, we've learned that the best time for taking count in the various sports is at the close of the regular season.

For example, in the fall the head football coach is supplied with a full complement of equipment and charged with the responsibility of issuing it wisely and taking care of it. At the close of the season, the coach is asked to submit a record (compiled according to the described inventory system) to the director of athletics. This account also indicates the squad needs for the following year.

Our inventory plan has been in use the past ten years. It has proved highly satisfactory for several reasons. It necessitates little deskwork; it places definite responsibility on the various coaches and instructors; and it enables the administrator to get an over-all picture whenever he wants it.

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To obtain free literature and sample goods, carefully check items desired and mail coupon directly to Scholastic Coach Advertising Department, 351 Fourth Ave., New York 10, N. Y.

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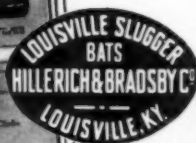
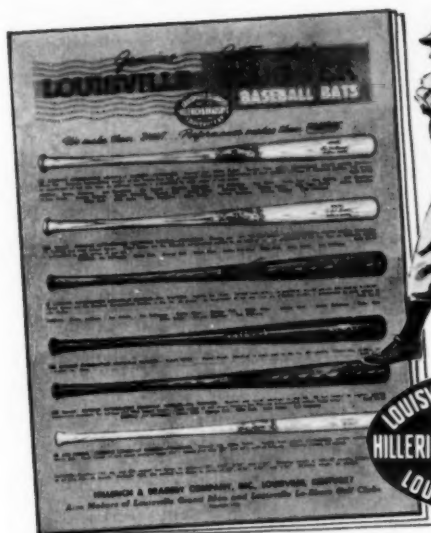
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